

Jas. D. Dwyer

Farm

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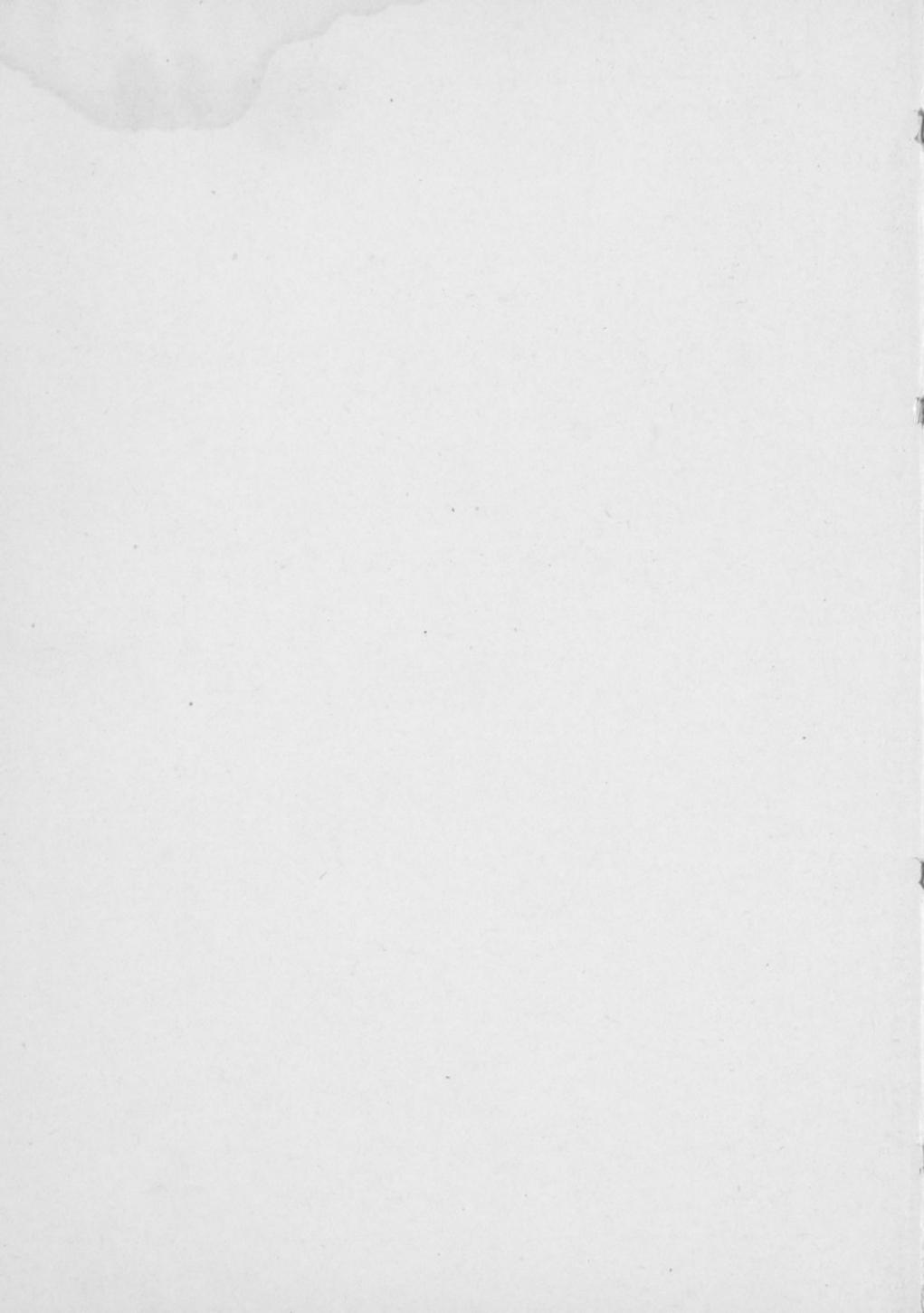
Management



Jas. D. Dwyer
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The business of farming
as successfully carried
on in Canada

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FARM MANAGEMENT

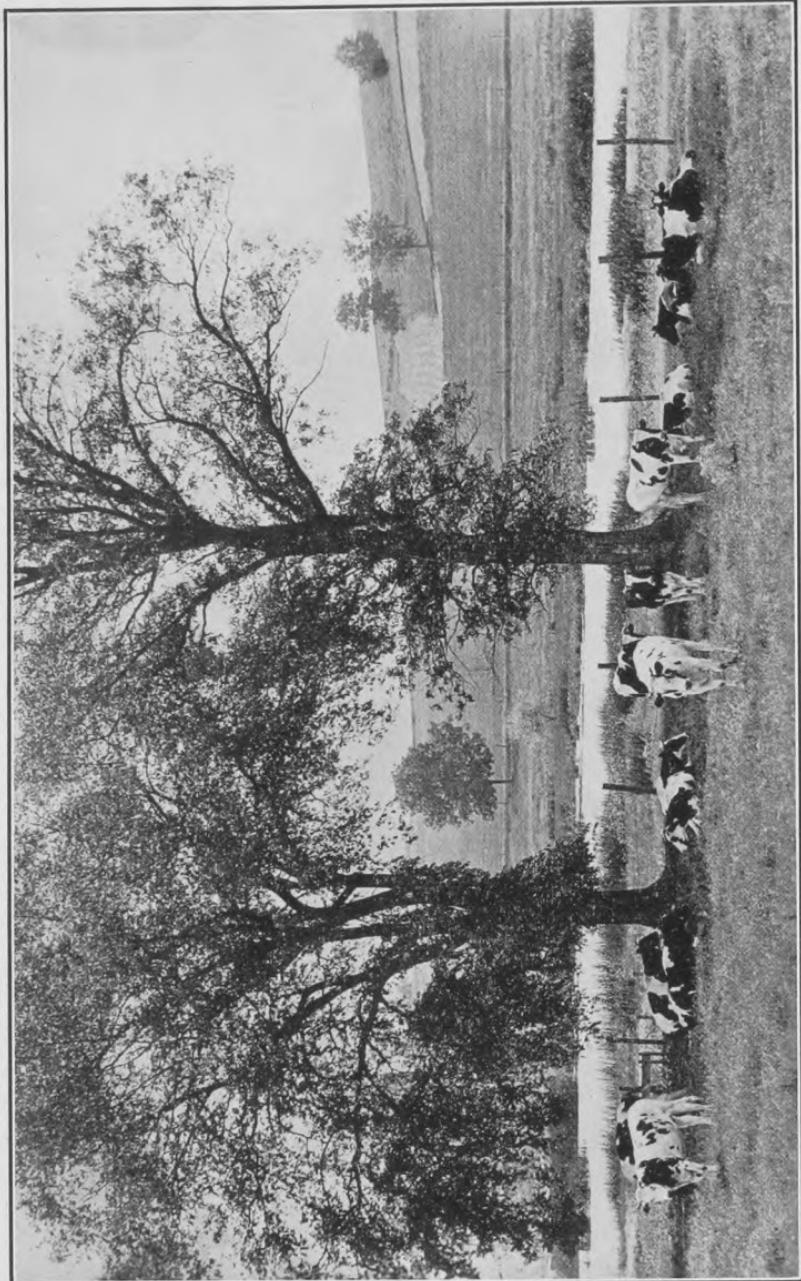
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[Frontispiece]

Where cattle thrive with grass, water and shade.



INTRODUCTION

TO THE study of the problems of farming and farm management there is no end. There is little that is fixed or unchangeable in agriculture. A constant shifting of economic values requires corresponding alterations in farm plans, and quite often necessitates radical changes in farm procedure. And with every change required, new problems arise, which vary in degree and in method of solution, according to the particular type of farming followed, market conditions, soils, capital resources, farm layout and the individuality of the farmer.

A sound knowledge of the general principles upon which success in the various types of farming is built is essential. In addition, the farmer will find it decidedly useful to be able to review the methods followed by successful men who may farm under conditions similar to his own. It is stimulating and heartening to read of success being achieved in times such as the present, when difficulties sometimes seem overwhelming.

This book, which, like the useful volumes which have preceded it in the series, is a contribution to Canadian agriculture from another industry, gives a great deal of sound, sensible advice. The discussions of the various economic factors are heightened in value and given a lively interest through the many references to the experiences of practical farmers. The reader will find no radical schemes expounded for the making of a "new agriculture," but he will find much of practical value and an insistence on those tried and proven principles which have been found successful in building many a permanent and paying farm business.

Thomas L. Kennedy

Minister of Agriculture,
Province of Ontario.

CANADIAN agriculture covers so vast a territory that it was necessary in gathering the information for this publication to limit our efforts to Ontario and the Prairie Provinces. It was also necessary to limit the scope of this book by confining it to general farming. It is hoped, however, that the experience collected and compiled here may be of interest to farmers in all parts of the country. The purpose of this publication is to serve the farmers of Canada.

PREFACE

THE purpose of this publication is to place before the farmers of Canada some plans and methods that have been practised by people making a living on the land in this country. The information was carefully collected by visits to farmers in their own homes in the three prairie provinces and in Ontario.

The instances mentioned here could have been multiplied hundreds of times, and examples given showing much larger profits, but the plan was to get information from good average farmers.

This was a year in which many examples might also have been obtained of farmers who are in a rather bad way, but the object in gathering this information was to point the way to succeed, hence we are giving the methods of some of those who have had a fair measure of success.

There is no desire to be dogmatic in recording these farm experiences. Tilling the soil cannot be successfully followed as an occupation by any set of fixed rules. Conditions vary so much that any plans and methods must be applied with intelligent variation to certain districts.

A good few farmers have met with actual distress this year. Lack of moisture, cut worms, and falling prices, have made a difficult combination to overcome in some of the prairie districts, and we have no desire to minimize these conditions, or the attendant ills they are now visiting upon the farmer. If there are men, however, who have come safely through in prosperous years and those of depression, the information about what they achieved was never so valuable as at the present time.

There can be no revolution in agriculture. Many of our farmers will only recover from their present circumstances over a considerable period of years, though we have seen in the past how quickly prices can, at times, advance. What must now be done, however, is to shape the methods of farming along the lines in which continued successes have been achieved.

One of the most important necessities in relation to agriculture is the keeping of farm accounts. The farmer must take stock, and must do it periodically. The late

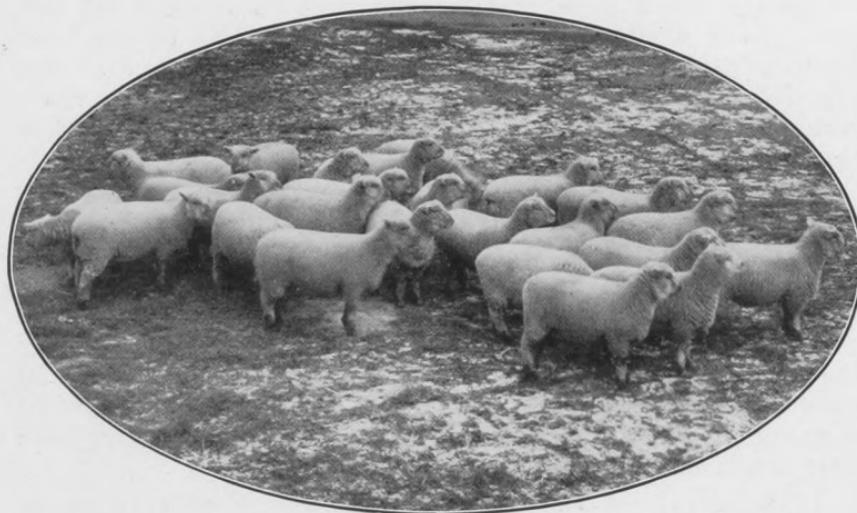
President Roosevelt said, "Nine-tenths of wisdom is being wise in time." Viscount Grey, of Fallodon, Britain's greatest Foreign Secretary, in his "Twenty-five Years," makes this significant statement:

"Some people who are really quite well off suffer from the apprehension that they are becoming poor; 'workhouse fever' is one name for this disorder. Others become bankrupt from not having had the courage to look into their affairs when they first began to fear that all was not going well."

The latter circumstance is one for the farmer to guard against and an accurate system of accounting, and definite plans for the profitable operation of his farm, will save the situation for him.

The hope is that the views, opinions and practices herein recorded may be of some value to farmers who read this book.

We wish to gratefully acknowledge assistance given us by farmers, Dominion Experimental Farms and Agricultural Colleges, which has made the production of this book possible.



First Prize carload of Wethers, Royal Winter Fair, 1930. Exhibited by Ontario Sheep Breeders' Association

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Chapter I

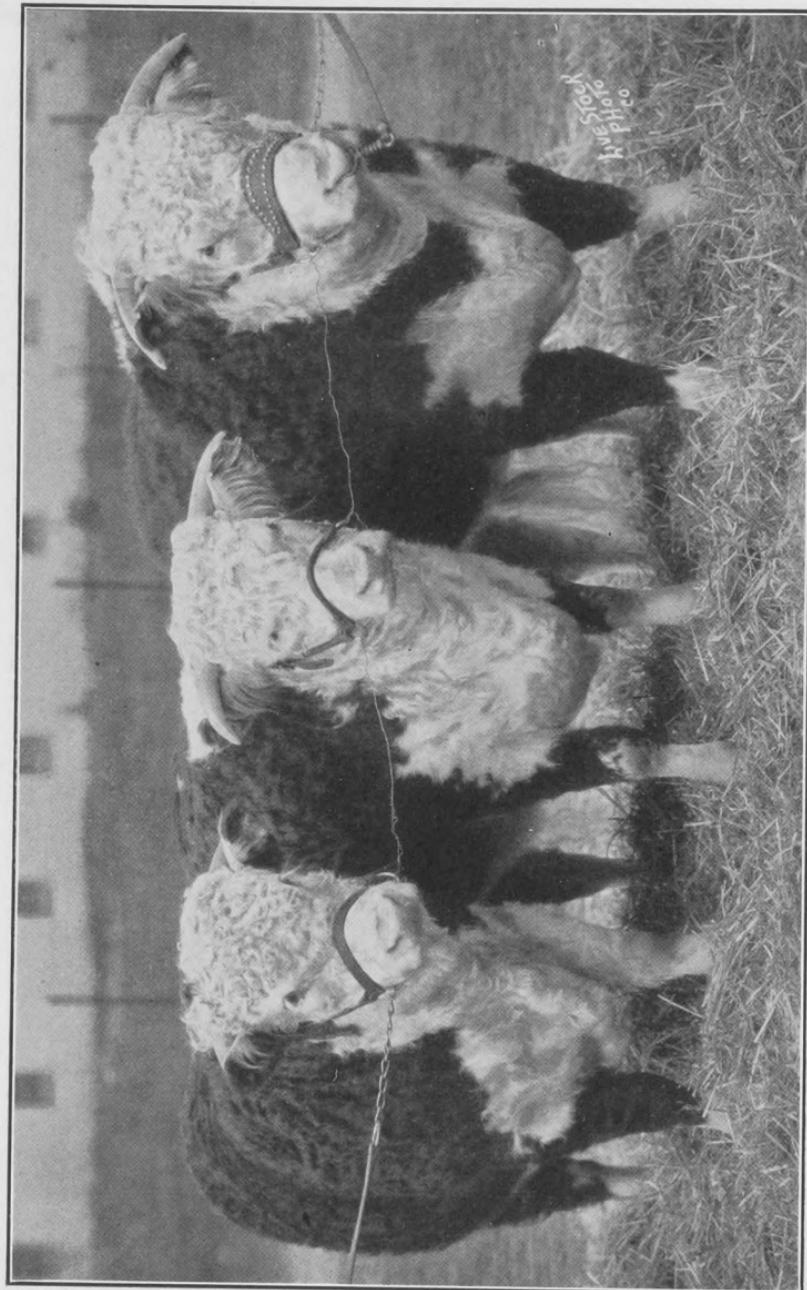
WHY WE FARM

FARMING is an occupation which should enable people to live a useful, profitable and enjoyable life on the land.

It is a business out of which men and women only get the best results when they are intensely interested in every phase of their daily work. Farming requires the keen personal attention of those engaged in it. At times it requires active physical labor, and patience and industry are essential to its success.

People may farm with the idea of making money enough to enable them to retire. Others become tillers of the soil for the purpose of establishing a permanent, self-supporting home on the land, or because they prefer to live in the country. There are also people who live on the land because they are interested in farm animals, and the charm of producing and developing these to a measure of perfection has a strong attraction for them.

Single Crops Farming for profit alone is usually confined to the production of some cash crop on a large scale. Wheat would fill first place in Canada for this kind of farming. Cattle raising is also a large-scale business in the ranching districts, and fruit growing could be, and is, attempted in a big way in some districts. This single crop system of agriculture offers large returns under favorable conditions and good prices. When prices drop suddenly, or weather conditions are fatal to a crop, it offers the same opportunities for losses. This kind of farming is, therefore, highly speculative, and offers success only to men who have exceptional ability in meeting a crisis, and who can handle numbers of men and machines in a skilful way. This might be called big business in farming, and meets with success only under men who have the capacity for directing large organizations.



Live Stock
Photo
Co

First Prize Hereford Get of Sire, 1930 Royal Winter Fair, Toronto. Bred and owned by Frank Collicut & Son, Crossfield, Alberta. The Get of Prince Domino 10th.

The Average Farmer The farmers of Canada are a cosmopolitan group. They have been recruited from almost every country, and from nearly every walk of life. The lure of the land brought them to this country, and many of them had much to learn. This is true of all new settlers. Eastern Canadian farmers moving to the prairies find themselves faced with new conditions of soil and climate with which they are not at all familiar. The pioneer in any country must study local circumstances and adapt himself to the demands of new situations. There seems to be no end to what one can learn about farming, and in no other business is it so valuable to understand the methods of the successful operator.

We Are Workmen All The majority of the people in Canada earn their living largely by physical labor. The better this physical labor is directed by the intelligent brain of the man performing it, the more satisfactory will be the results. The skilled mechanic loves oil and grease, because they make wheels run smoothly. When he is guiding a planer that shapes a piece of steel, he is not bothered about being splashed with oil. He wants things well lubricated, everything greased for the occasion. Working in overalls, he has no envy for the man in a "white collar" job, who perhaps earns less than half his income. Of this great group of men who labor, in working clothes, the farmer should stand at the very top, and they are all far in advance of many people who have drawn an office job in the lottery of life.

Town or Country As between the average farmer and the average man who lives in town, we have this important difference. The town man's ambition is to own a home. He buys or builds a house at about the cost of a farm. While he works and earns he is comfortable, but when slack times come and he finds his earning power dwindling, his house, while very desirable as a place to live, is in no particular self-supporting. The farmer builds his

home on his farm, or purchases a piece of land already built upon. His farm is then the source of his income. He is a producer of food, and if dull times come he has a home that supports his family by supplying food, and the equivalent of clothing, and he need never have any fear of joining the ranks of the unemployed. The farm offers endless opportunities to him for doing useful work.

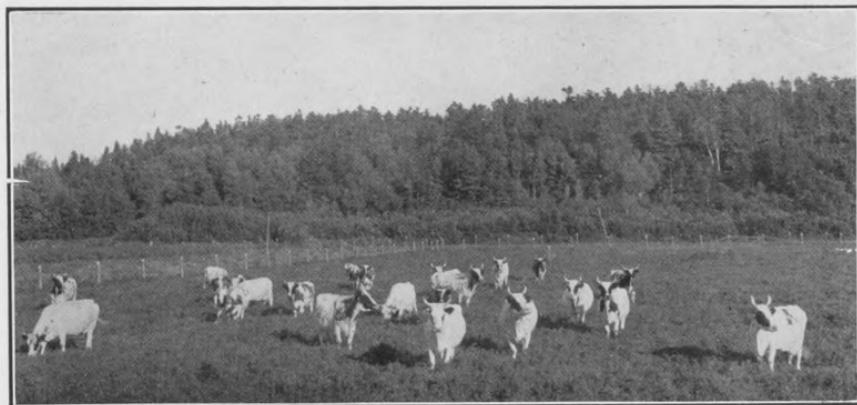


His Majesty, King George V., with his champion Hereford heifer, Clairvoyant Jewel, at the Smithfield Show, London.

Misleading Comparisons

In comparing occupations, farming has often suffered because of the so-called "drudgery" that has been attributed to it. Tremendous efforts upon the part of the first settlers were required to subdue the forests in the East, and break the prairies in the West. Memories of these pioneer hardships are still fresh in the minds of the people of Canada. Because of this, farming has often been eschewed for what was thought to be an easier occupation. The first settlers set themselves terrific tasks in much of their earlier work. They were men of brains and brawn, and they accomplished undertakings that people would shrink from now. We are fairly well past that stage, however, and farming should no longer repel people because of its hardships or drudgery.

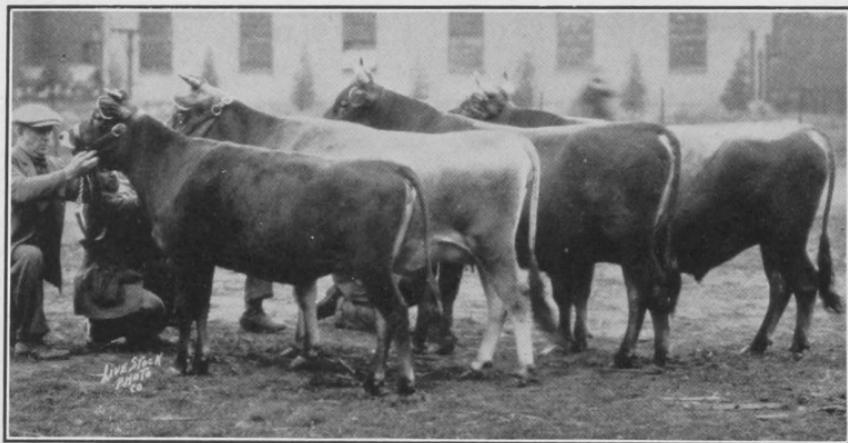
Men who farm must be prepared to work, and work hard at certain seasons, but they can have some leisure, and can get more satisfaction from the success of their business than is obtained from most occupations. The experiences of farm life contain a wealth of education, and boys raised in the country have a decided asset in the knowledge they pick up on the farm in their youth, no matter what business or profession they may turn their attention to later in life.



Ayrshires on the Dominion Experimental Farm at Ste. Anne de la Pocatiere, Quebec.

Farming Profitable There are occasions when the stories we read would almost lead us to believe that farming is a rather inferior occupation — that it is one in which men engage because of their early environment, and from which they are hardly expected to make more than a living.

The splendid farm buildings you see as you drive through any province in Canada is a direct contradiction of this. These improvements represent profits made from farming the land upon which they are situated. Many farms have grown, out of the profits of the land, from a small acreage to very substantial establishments. Sons and daughters have been educated, and others have been set up on their own farms, all from the earnings of the old home-stead. Farmers' boys and girls get as good a start in life's business as the sons and daughters of any other class.



*Winning Get of Sire Jerseys at 1930 Royal Winter Fair, Toronto.
Owned by Henry Thompson, Brandon, Manitoba.*

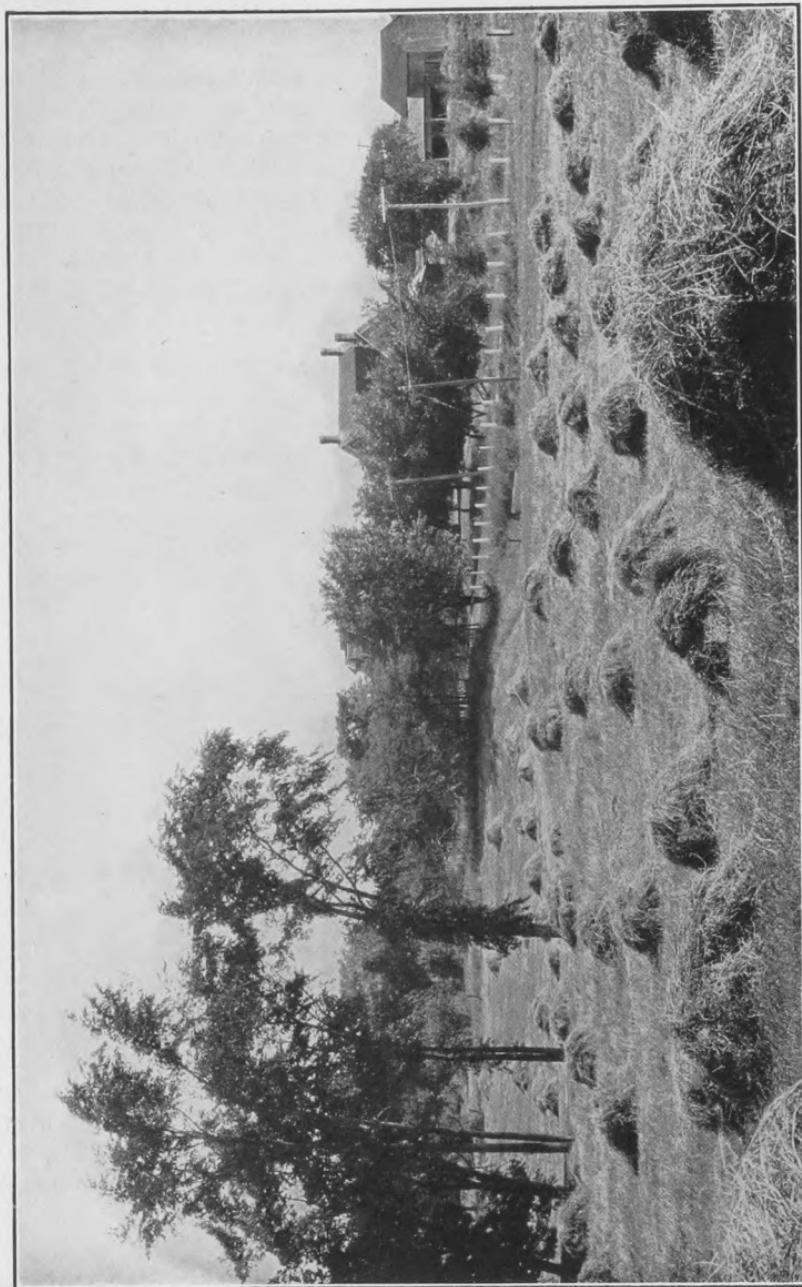
Farming Will Compare Well If you look over the list of men in any business or profession, how large a percentage make an outstanding success of their undertakings? The number is very small indeed. I am strongly of the opinion that a larger proportion of farmers succeed than of people in any other business. This does not mean that it is easy to farm—far from it. Tilling the soil and breeding livestock, and doing both well, requires a large measure of both intelligence and industry.

The farmer must have a knowledge of soils and how to handle them, how to conserve their vital elements and how to restore them when exhausted. He must be a business man and a scientist, and if he is breeding farm animals, he must have a wide and varied knowledge of breeds, their ancestors, and the results achieved by other breeders and feeders. In this interesting occupation of dealing with living things, he will find a whole kingdom to explore in the search of knowledge.

Ownership and Occupation The farmer can be the sole owner of his own business. Upon his own resourcefulness will depend his success. He must be ready to face some hard work, but who accomplishes much by any other method? There is a pride in the ownership of a farm that gives one as nearly as possible, "The glorious privilege of being independent."

In these days of keen competition, many men do a great deal of worrying about their occupation after they have passed their fiftieth milestone in life. If a man should lose the position he has, it is often very difficult for him to break into another business, even in the same line, after he is fifty years of age.

The farmer is freed from these fears. If he is established on his own land, he is his own employer and he can continue on as long as he pleases. He will not be fired at fifty.



Alfalfa, the king of fodder crops, on an Ontario farm.

Supplies Part It is not always easy to accurately estimate the cost of living on a farm as compared with that of the city resident. Surveys have been made of a number of farms, covering a period of years, and the results have shown that a farmer's family will get about one-half of their living off the farm.

The farm will furnish the house, so there is no rent to pay. If the farmer is engaged in diversified agriculture the milk, eggs, and meat will be entirely supplied by the farm. Some farmers buy meat, but there is little excuse for this, except in the case of some fresh meat in the summer, where there is no beef ring.

Potatoes and all other vegetables are supplied by the farm. In many cases fuel is wholly or partly furnished by the farm. The year 1930 has re-established, in many districts, the old custom of taking a grist to the mill and having flour ground for the household. In such cases, the flour is furnished by the farm.

The part of their living that farmers have to purchase consists of groceries of all kinds—tea and coffee included; part, or all of their fuel and light. Part of their meat would likely be bought, and whatever additional help was required in the home would have to be paid for. From this it will be reasonable to estimate that the farm supplies a full half of the family's living to those who occupy it. It might, therefore, be considered that it costs the farmer's family only one-half the amount of cash outlay for their living that it costs the residents of a city.

In the matter of clothing, the nature of a farmer's work is such that the cost of his clothing is kept within a very reasonable amount. He can be quite as well dressed as the city man when occasion demands it, and so can his wife and children, yet their outlay for clothes may be a very moderate one.

Advantages of Environment There are habits of industry that children form, who grow up on a farm, which are invaluable to them later in life. The habit of early rising, of performing light chores or tasks, and the use of both hands and head in doing these daily duties, which is excellent training.

Work always looks formidable to the person unaccustomed to doing it. The boy who helps to take off a reasonably large harvest is afterwards very apt to be ready to tackle quite heavy tasks with the confidence that makes work much easier. The work on a farm is not all physical. There is no place where a boy will be called upon to use his brains as frequently as he will upon a farm. He will have daily opportunities to exercise his inventive genius and his resourcefulness.

Experience Valuable There is no occupation in which experience counts for as much as in farming. Men who were not brought up on a farm can learn the business, but they suffer a great handicap in the lack of that youthful experience. There are a thousand things that the farm boy knows instinctively, because of his daily experience of watching plants and animals grow. The man who tackles farming, later in life, has all these to learn.

Beauties About Home If our public schools would only give a little more attention to teaching the boys and girls something about the natural beauty of the landscape and the privileges of country life, it would greatly help farming as an occupation. Trees, hills, grass, and waving fields of grain, all have an attractiveness of their own. Every bluff of trees that surrounds a prairie home adds to the enjoyment of life on the land. Boys and girls should be given a lead by their public school teachers in understanding and appreciating the advantages and possibilities of the outdoor life on a Canadian farm.

Chapter II

SELECTING A FARM

A DECISION has sometimes been made by people to buy a farm because it is located near that of some friend. This is quite a temptation when a person has left home and is moving to a new country. It is by no means a rule that you cannot get good land near your friends, but the nature of the soil, and not your friend's location, should be the reason for your selection.

Soil and Markets A farm should be chosen because it is the kind of land you wish to farm, and is so located as to afford you a reasonably good market for what you may have to sell. Land is the chief asset in your farm, and a purchaser should examine it more carefully than he frequently does. If he has no intimate knowledge of the locality, he should secure information as to rainfall, climatic conditions, and the crop results in that locality, and this information should cover a period of years.

The natural fertility of the soil should be the deciding factor in selecting a farm, the location being reasonably good. Costs of operation are to some extent determined by the nature of the soil. Heavy, stiff clay will entail high labor costs on account of extra power being required to cultivate it, and also because of lost time following heavy rains, when you must keep off such land.

Ease in tillage, however, is only secured at the cost of loss in fertility. The presence of sand in soil makes it easier to work, but it also renders it liable to the leaching of plant food.

Light, sandy soil is not desirable for general farming. A clay loam, or a black vegetable loam, makes very desirable farm land. Clay land is very dependable for cropping, and can be greatly improved in friability by growing alfalfa on it. In selecting a farm, weigh carefully all these considerations, and always keep in mind that you are selecting a home.

The soil in every field should be carefully examined. Land will vary a great deal over a small area sometimes. When the casual manner in which people frequently purchase land is considered, it is not surprising that a great many buyers suffer from disappointments when they begin farming. Investments in farm lands should be very carefully made.

Natural Drainage Drainage is very important to growing crops, and land with a slope that will run off the surplus water has great advantages. Stagnant water lying in pools on a field, after a rain, is very injurious to crops. It is only the soil moisture, absorbed by the land during a shower, that is useful to the growing crop. Surplus water should be drained off as quickly as it falls.



*Aberdeen-Angus Females, 1930 Royal Winter Fair, Toronto. Owned by
W. J. F. Warren, Belbeck, Saskatchewan.*

The advantages of natural drainage are, therefore, quite apparent. If every field on your farm has the fall necessary for this, it will greatly add to the value of the land and may save you considerable drainage costs.

A Ready Market Convenience to markets has a money value in a farm. Time lost in conveying livestock long distances to a selling place adds to the cost of farm operations. If a farm is close to a large central market so much the better. This may be not only a selling market for the farms, but it may be an important buying market as well.

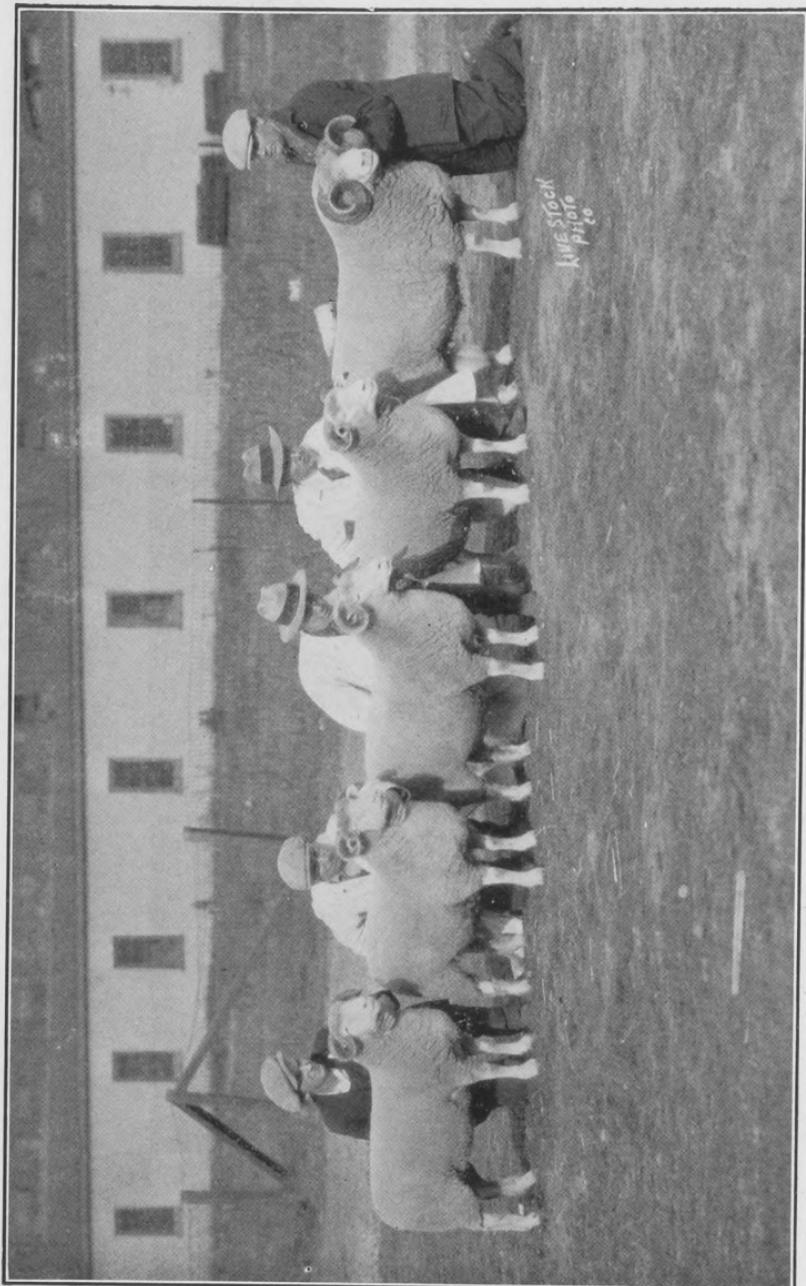
Pigs, lambs, and store cattle for feeding, are often available at a central market, and often with profit to the farmer. If at some period you have a surplus of cheap feed, it may be profitably sold by feeding it to animals purchased in such a market. Livestock for feeding can usually be more easily obtained in such a market than by driving about the country to buy them.

Every farmer cannot live near such a market, however, and you must determine your land value upon its proximity to such a business convenience.

A Farm Home A farm is bought not only as a business enterprise, out of which to make a living, but also as a home for a family. This gives us additional and important reasons why the selection should be carefully made. The location of the buildings should be carefully considered, as good drainage from both house and barns is of great importance.

The health of the family comes first, and then the health of the livestock should be considered. The house must be sanitary, and the stables either well lighted and ventilated, or else capable of remodelling at moderate cost to give them both air and light.

Schools, churches, and other institutions of community interest are worthy of consideration, and their proximity should not be overlooked. Farms are sometimes offered for



LIVE STOCK
LIVE STOCK
Photo
Photo

First Prize Dorset Horned Flock, Royal Winter Fair, Toronto, 1930.
Owned by Cecil Stobbs, Wheatley, Ontario.

sale that have been overbuilt. It is a good plan to have adequate buildings, but on some farms money has been squandered in buildings to such an extent that their upkeep will cost more than their usefulness is worth. Avoid such farms unless you can tear down part of the buildings advantageously. If the land is poor, upon which such buildings have been erected, then this surely is a farm to avoid.

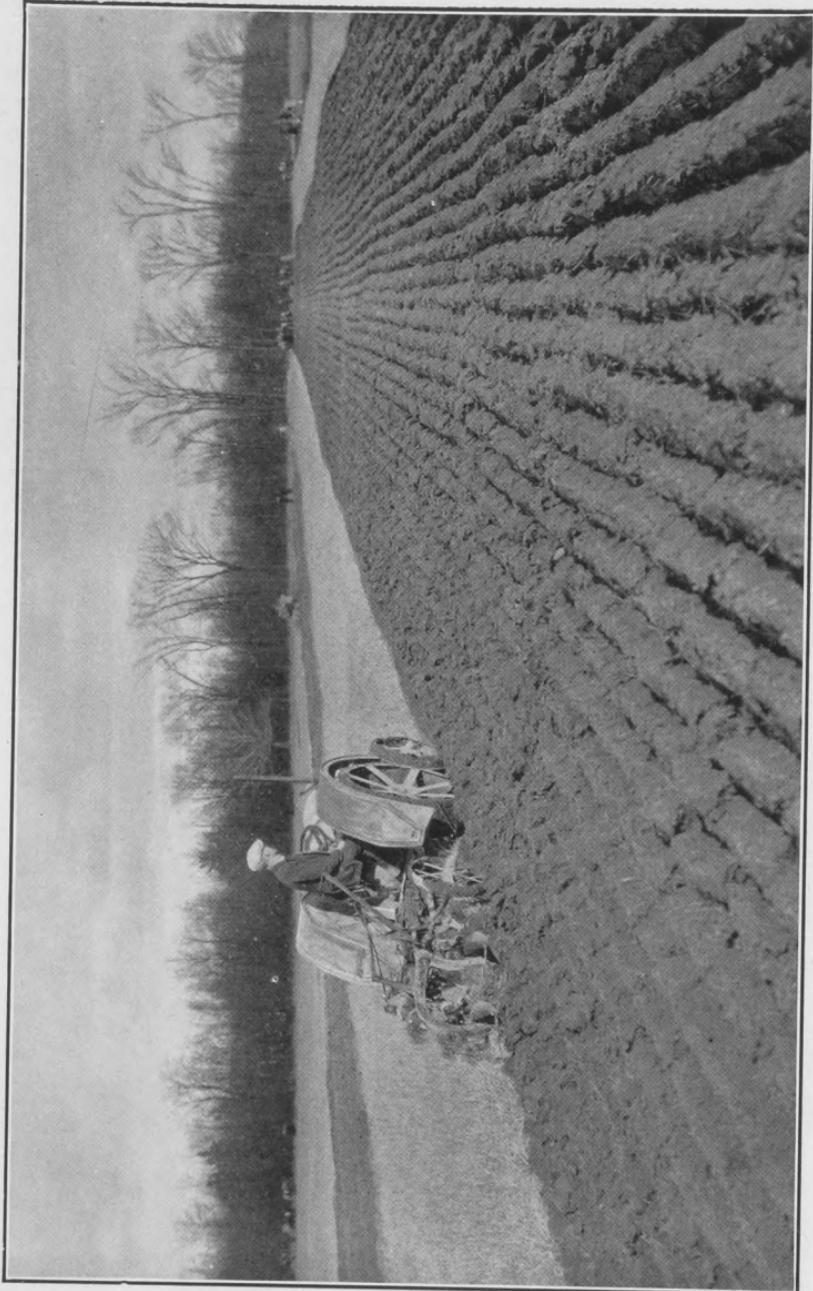
Buy With Buildings The ideal plan to secure what you really want is to buy land without buildings and erect what suits you. Building, however, has become so expensive in recent years that often a farm can be purchased for a price that includes only a small allowance for really good buildings. This is an inducement to buy land that is built upon, but in such case be careful to examine the buildings as to the probable cost of needed repairs.

Fences come in the same category as buildings, and in purchasing a farm, very careful calculations should be made as to the expenditures required to fence the farm efficiently. Irregular-shaped fields should be straightened out, and small fields, except for hog or calf pastures, should be eliminated, so as to save time in working.

Visualize the farm as you want it for operation, and count the expense necessary to bring it into that condition as part of the purchase price. You will then have a going concern, so equipped as to make money from the start.



Farm buildings of J. B. Day, Wilcox, Saskatchewan.



Tractor competing at the International Plowing Match, Stratford, Ontario.

Chapter III

INVESTMENT AND TAXES

THERE are two charges that a farmer will have to meet every year, outside of his living expenses, no matter what his crops yield, or what they sell for. These are taxes, and interest on borrowed money. It is, therefore, of great importance that these should be reduced to a minimum.

Taxes on Land Every farmer should take an interest in the business of the municipality in which he lives. It is not necessary for him to be a candidate for office, if he is not inclined toward public business, but he can attend the ratepayers' meetings and make his protest against extravagant increases in taxes.

Schools and roads are a prime necessity, but these can be secured with some regard to the taxpayers' ability to pay. It is when times are prosperous and farmers are making money that municipal councils increase taxes and mortgage the future of the municipality. It is in these years of good prices that busy farmers neglect their municipal government, and do not pay much attention to the tax bills, because they have ready money to pay them. Once taxes are increased, however, it is exceedingly difficult to get them reduced.

Taxes, like living expenses, are very easily raised, but are only lowered by an extraordinary effort. Tax bills in some municipalities have almost reached the proportions of a rent, and in lean years they are quite a substantial rent. The only way to get down to bed rock is for a considerable group of farmers to make a concerted protest, and if necessary elect men to the councils who will base their public expenditures on what people are able to pay under very moderate farm profits.

In many cases unpaid tax bills are growing into a very

formidable charge against land in Canada. The exemption from taxation of improvements on farms, in the prairie provinces, is of decided advantage to the industrious farmer who is trying to make conditions as comfortable and livable as possible on his farm. The rates, however, are too high, and some concerted action should be taken to cut them down.



Glenburn Field Marshal, Grand Champion Shorthorn Bull, 1930 Royal Winter Fair and Canadian National Exhibition, Toronto. Bred and owned by Colonel F. H. Deacon, Unionville, Ontario.

Farming Investments Every acre of land a farmer owns is a charge against his farming operations. He has invested money in it and pays taxes on it. These are

quite good reasons for endeavouring to have every acre produce something. We frequently find waste land, on farms, which is a liability rather than an asset. It may be that only a little brush requires to be cleared off or a pond of water drained, and several acres of good land can be brought under the plow.

We usually find such land used as pasture, but producing nothing of consequence. The grass on it may be thin and poor, with a liberal supply of weeds. This land should be broken up, if only for the purpose of getting it seeded to good grass which will produce summer feed for livestock.

On the prairies we often find small depressions in fields that will hold water until well on in the Summer, and then leave a dry slough bottom to disfigure the field. In the Spring you have to plow around these ponds at a loss of time and labor. I found the best way to deal with one of these was to blow a straw-stack into the depression made by it. The straw would be eaten by the stock, or hauled off for bedding, and the stack bottom would get soaked with water and fill the depression. It might take a second stack the following year to complete the job.

I then got road scrapers, and after the crop was harvested I plowed any high spots near and scraped the earth onto the old stack bottom to the depth of about a foot, and the slough was gone for good. In one case, near the house, where we hauled a lot of strawy manure to fill in over the stack bottom, we produced one of the most prolific mushroom beds I have ever seen. In September they came up among the grain in great profusion, some of them measuring five or six inches across.

Utilize All Your Land A farmer should endeavour to utilize all his land. Before you buy additional land, bring all that you already own under a useful state of production. I remember some twenty years ago hearing a man complain at a farmers' meeting on the prairies that 160 acres was not enough land for a homestead. His



Orchard of W. A. Fraser, M.P., Trenton, Ont.

claim was that the government should increase this to 320 acres. I also recollect the remark of another farmer, present at this meeting, who knew the farm of the one complaining. He said: "No, one hundred and sixty acres of land with only twenty acres broken does not seem enough for a homestead." It is only the land in use that gives the farmer returns, and the amount of land you have producing its maximum of crops determines the area of your farm. One hundred acres, well cultivated, and producing uniformly good yields of high-quality, clean grain, is far more profitable than twice the acreage overrun with weeds, and yielding light crops that scarcely pay the cost of the labor of seeding and harvesting.

Land lying waste, or in an inferior state of production, is one of the leaks of farming, and it is the one closest at hand for the farmer to close up at once. Take a few acres of this waste land each year and bring it into cultivation. It most likely is virgin soil, and so will yield good crops and pay well for the labor spent on it.

Improve Your Investment The usefulness of your land determines its value, and if you wish to sell at any time, the farm that will command the best price is the one that is producing good crops. If every acre you have to sell is in use, the purchaser will be willing to pay a higher price per acre.

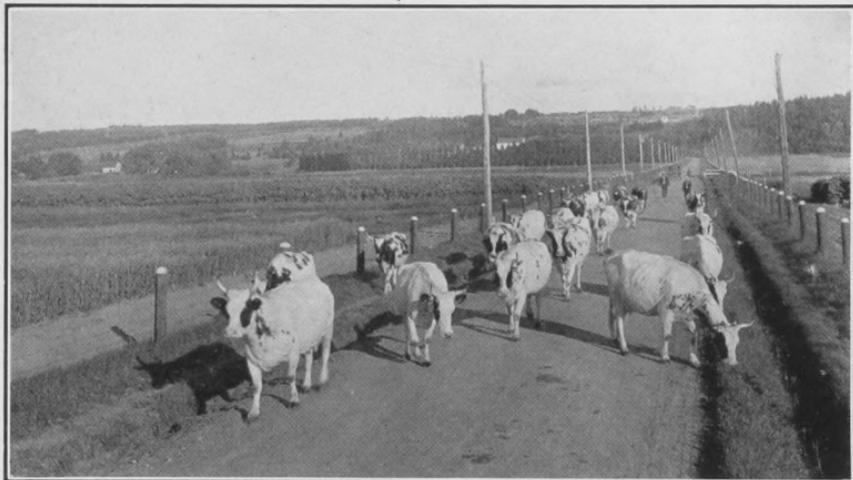
Your investment in land can best be safeguarded by showing from year to year the value of your soil in productiveness, and by the fact that all the land you have bought is capable of being used for its owner's benefit.

Water, shade, and luxurious grass make an ideal summer home for cattle, sheep or horses.

Laying out the fields on a farm, which a stream crosses, must be done with due regard to the creek or river. If it crosses one corner, a pasture field can be fenced there, but if it goes completely through the farm different plans must be made.

Pasture Location Outside of the necessity of arranging pasture fields in the banks of a stream or pond, they should be located conveniently near the buildings. The plan so often followed of having pasture fields at the back end of the farm is not a good one. Livestock, especially cows that are in milk, should be nearer the buildings.

Shade, if it can be easily secured, is of great value in pastures. There are some very annoying flies which will not follow cattle into the shade, and this refuge should be accorded the animals whenever possible. It takes years of planning and planting to build up the surroundings of a good livestock farm. Such a place should be established as the ancestral home of future generations, who shall follow that finest of all occupations—livestock farming.



In Old Quebec—At that witching hour, in the Northern Summer, 'twixt the gloaming and the mirk, when the kye comes hame.

Chapter IV

PLANNING AND FENCING

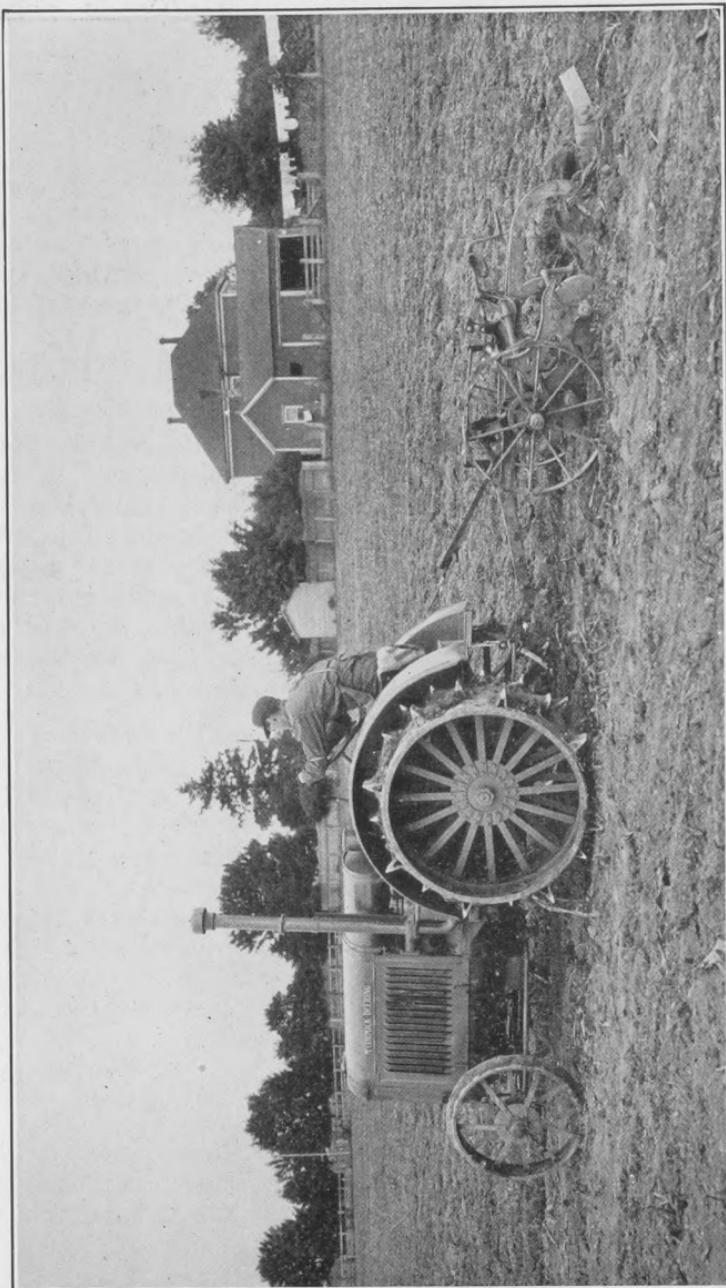
THERE is a great deal of what might be called lost motion on many farms from bad planning of buildings and fields, and irregular and inefficient fences. Nothing gives a farm a more prosperous look than good fences that have the appearance of being "horse high", "bull strong", and "hog tight." They give to the farm a prosperous air to which it will most likely be entitled.

Locating Buildings If a farmer has the locating of his buildings, on a new farm, this should be done with due attention to the convenient and satisfactory operation of the farm. The first consideration is that the house shall be so situated to give it a satisfactory water supply, and good drainage. Locate your well first, and your house close by, with drainage away from the well, so that the cesspool can be placed where its drains will be well below, and away from, the location of the well.

Water Supply Two wells, if they are easily provided, one for the house and another for the barns, are of distinct advantage, as water systems for farm houses are usually operated directly from the well without a storage tank. If you have a well at the barn also, you have less piping to give occasional trouble.

There are places on the prairies where water is very difficult to find, where the price of a farm has been spent in drilling wells, with no results but dry holes, or water unfit for use. Many of the men in these localities have only been able to secure a supply of water for their stock by making a pond into which surface water can be drained. In some cases it is filtered through gravel before being used.

Cost of Water I recently visited two farms, near Moose Jaw, upon each of which at least \$10,000 had been spent to provide a supply of water for the live-



Farm of Alex. Davie, Fraser Valley, B.C.

stock. One of these men, Mr. F. H. Jones, who resides about three miles north of Moose Jaw, has a herd of over one hundred dairy cattle, his plan being to have about seventy cows milking all the time. He operates a milking machine and is an up-to-date, progressive dairy farmer.

His home is a credit to himself and his capable wife. It takes no small amount of enterprise to carry on a dairy farm in the face of the water problem Mr. Jones had to solve.

The other farmer is Mr. W. J. F. Warren, who lives only a short distance north of Mr. Jones. Mr. Warren has been a breeder of Aberdeen-Angus cattle, and at the Toronto Royal Winter Fair, in November last, he captured a first prize, though he had only three animals at the Show.

He is one of Saskatchewan's substantial farmers, and his home and buildings are a credit to the district. He, too, had a good deal of courage to persist in fighting the water problem, until now he has a fairly good solution in a large pond not far from his buildings. Farmers who have a plentiful supply of water can scarcely realize the difficulties these men are up against.

Buildings Convenient In locating buildings it is important to keep in mind the convenient working of the farm. It is usually not advisable to place the buildings near the centre of the farm. Convenience to the public highway must be kept in mind, and in these days of motor cars, and motor trucks, it is necessary to have a gravel road from the buildings to the highway, and this road should not be of undue length so its upkeep would be costly. Buildings should be set a fair distance from the road. If the house is about one hundred yards from the public highway, this would leave room for a lawn and some trees and shrubs, as it is not always desirous to have a field between the house and the highway. The barns can then be located according to the fall of the land, and should be convenient to the house, but not annoyingly close.

Regular-shaped Fields One of the things to avoid is irregular fields, making acute angles to work in. All fields should be square or oblong and should be carefully measured and laid out when the fences are built. It is a good plan to fence your farm so that the different fields each contain a specified number of acres.

In seeding a field, it is a great satisfaction to know exactly how many acres it contains. You can then weigh your grain and grass seeds and so be able to calculate exactly how you are planting it. If you are applying fertilizer, you can make similar calculations. It is a good plan to have two or three fields of the same size, so they may be interchangeable in rotations that include pasture.

At threshing time you can easily figure out the yield per acre from such a field, and in keeping your farm accounts this will be a great convenience. If your fields are a definite size you can easily make calculations as to the time and cost in cultivating them. A farm laid off in this way lends itself to a definite working plan and the greatest convenience in keeping complete records of your farm work and its results.



A ten-horse team on Provincial Government Farm in Alberta.

Time Lost A great deal of time is lost in working irregular fields and in feeding livestock in badly arranged buildings. Fields that are wider at one end than at the other are a source of vexation, as well as lost time, whenever you cultivate or seed them. They do not have an attractive

appearance and in every way are most undesirable. If you buy a farm with irregular or badly shaped fields, you should figure, as part of the capital expenditure, the cost of moving the fences and squaring up the fields.

The buildings that house your livestock should be constructed with a view to the greatest possible convenience in doing the chores. Feed lofts, above cattle and horse stables, are by all means the best method of storing hay, straw, or other roughage to be fed to these livestock. Where a silo is in use the feed room adjoining the silo should also adjoin the feed halls from which the mangers of the cattle are filled.

The lost motion about some farms in feeding livestock would make a considerable charge against the business.



Blanchard Boy 10th, Grand Champion Hereford Bull, 1929 and 1930 Royal Winter Fairs, Toronto. Bred and owned by McIntyre Ranching Company, Lethbridge, Alberta.

Pasture Field If you have a field with a pond or slough in it that is not easily drained, or if it is good water for stock and you don't wish to drain or fill it, the best plan is to seed this field to permanent pasture. This will give less trouble than plowing around it, and the water will be convenient for the stock. If you have such a pond try to arrange the field so that there will be dry land all around the pond. The wet boundary of the pond then will not creep into another field, and the cattle can wander around the water and not be so likely to attempt crossing it.

Get a Good Stand of Grass If you have such a field, be sure to get a good stand of grass on it for your permanent pasture. Do not be afraid to sow thirty or forty pounds of seed to the acre, and use a mixture that is adapted to your locality. "Field and Farmyard" gives several mixtures suitable for good pastures.

Before seeding this field to grass, see that it is in good heart; that the soil is not deficient in any of the essential elements of plant food so that the grass will get a good start and give no opportunity for weeds to grow. Once a good, close sod is formed the weeds will find some difficulty creeping in.

Running Streams The farmer who is fortunate enough to have a running stream or spring creek cross his land has a great asset for the production of livestock. Running water (pure and fresh) is a great luxury for farm animals, and every farm that has such a stream should capitalize it in the growing of livestock.



Farm buildings of A. A. Downey, Govan, Saskatchewan.

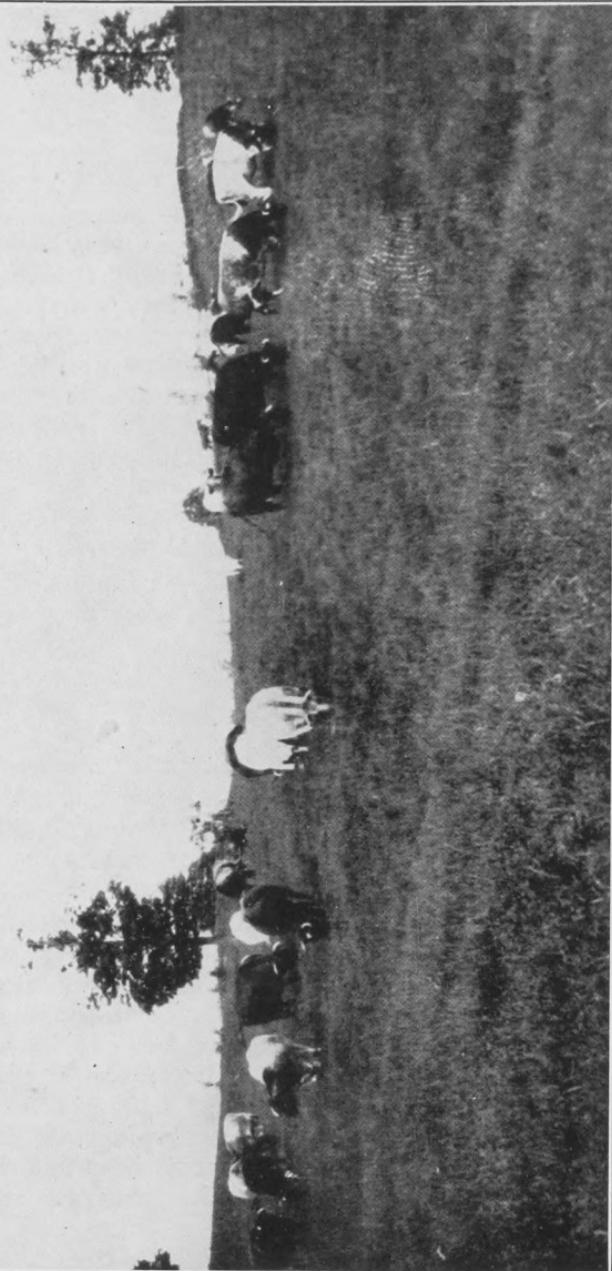
*Chapter V***MAP YOUR FARM**

A PLAN or map of your farm is very essential to the successful carrying on of useful rotations. A blank book in which you can draw a series of maps or plans, one for each year, will give you at a glance your crop records covering the period of years for which you have made these maps. It is fairly easy for a farmer to remember what crops he grew in each field, but that is information only for himself and is not a record to guide others who may have to take charge.

Map of Farm It is a very simple matter to make a plan of your farm. If it consists of what we call a square 100 acres in one of the eastern provinces, or 160 acres on the prairies which is exactly square, the plan is easily laid out. If the farm contains 200 acres, it will be two one-hundred acre lots, and a plan of each can be drawn, one on each page of the book. If it is a western farm, and is a half, three-quarters, a whole section, or more, a plan can be made for each quarter. If it is a very large farm, a plan for each section may be enough, as the fields on such a farm are likely to be large.

A Quarter Section Take first a plan for a quarter section farm, being 160 acres, and measuring one-half mile, or 160 rods, on each of its four sides. A square farm of this kind lends itself to very convenient arrangements for working, as no field will be very far removed from the buildings, and if the land is reasonably level there is no difficulty about seeing every field from the house, which is always an advantage where livestock is bred and raised.

The buildings should be placed near the main highway for convenience and because it is pleasanter to live not too



Shorthorn breeding cows, owned by James Douglas & Sons, Caledonia, Ontario.

far from a main thoroughfare. The exact location of the buildings should be decided by the lay of the farm, the house being built on high land and the barnyard having drainage away from the house.

Plans are appended for a quarter section farm and also for an additional quarter section. There are no hard-and-fast rules to follow except that where livestock is kept a few small fields are a great convenience. Pasture should not be too far from the stables where cows have to be brought each evening.

A Square Hundred The so-called square hundred acre lots in Ontario have 120 rods frontage by 133 1/3 rods in depth. These farms are convenient to work, as no field is a great distance from the barn. Fields on all farms should be planned to give a good length of furrow in plowing, so as not to waste too much time in turning. This becomes more advantageous in the use of tractors.

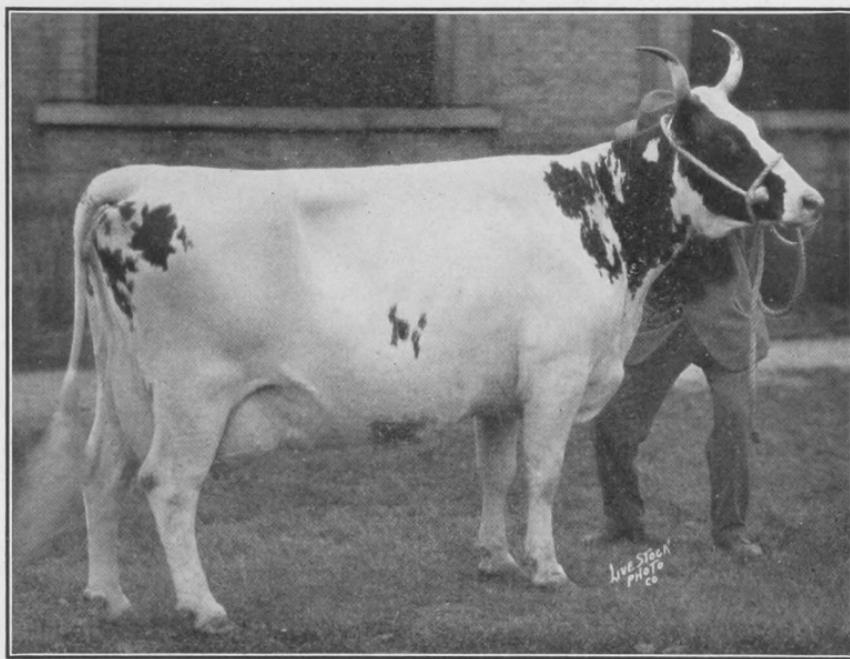
Buildings on a square hundred are most convenient if placed as nearly as possible to the centre of the farm. The question of drainage must be taken into account, however, in such location. A plan upon which a square hundred acres might be conveniently divided into fields is given at the close of this chapter.

A Long Hundred Many Ontario hundred acre farms are surveyed with 80 rods frontage and 200 rods in depth. The blocks of land in this case are 1 1/4 miles on each side and contain 1,000 acres, or ten one-hundred acre lots.

These farms are rather awkward to work, as the back field can be a long way from the barn, if the latter is near the front of the farm. These lots make very convenient 200 acre farms, which gives a block of land with 160 rods frontage and 200 rods in depth.

Even though these farms are somewhat long, it is not usually advisable to place the building very far from the main road. The grounds about a farm house are apt to get

more attention if near the public highway, and if well planned and kept in good condition, these grounds add to the attractiveness of the neighborhood. If the location is satisfactory in other ways, the centre of the frontage of this shape of farm is the best place for buildings. Fields may then run lengthwise of the farm, to get a fairly long furrow in plowing. There is appended a proposed plan for such a livestock farm.



Harleyholm Butterfly 3rd, Grand Champion Ayrshire Cow, 1930 Royal Winter Fair, Toronto. Owned by Gilbert McMillan, Huntingdon, Quebec.

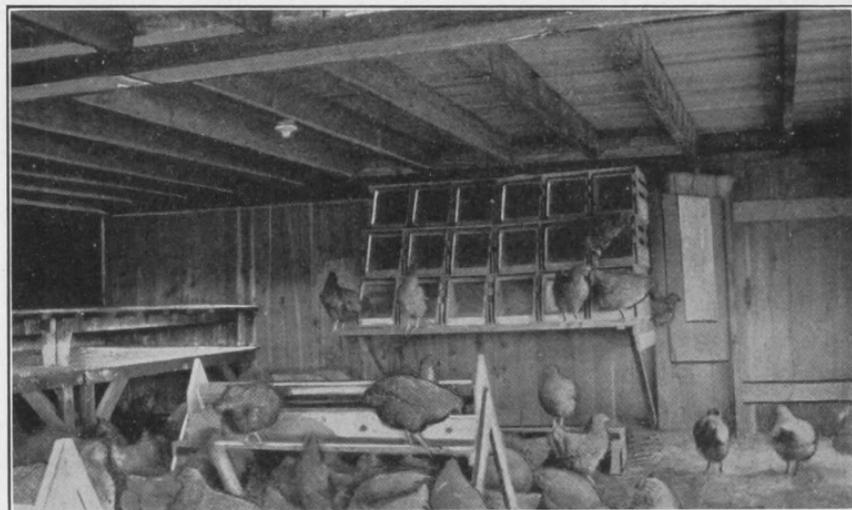
Re-Plan Fields If a farm is purchased upon which the fences follow the lines of least resistance and fields are of awkward and irregular shapes, the first business should be to straighten out the fences, and in many cases they might better be moved and the old fence

bottoms cleared up. This is not possible if trees grow along the fences, however.

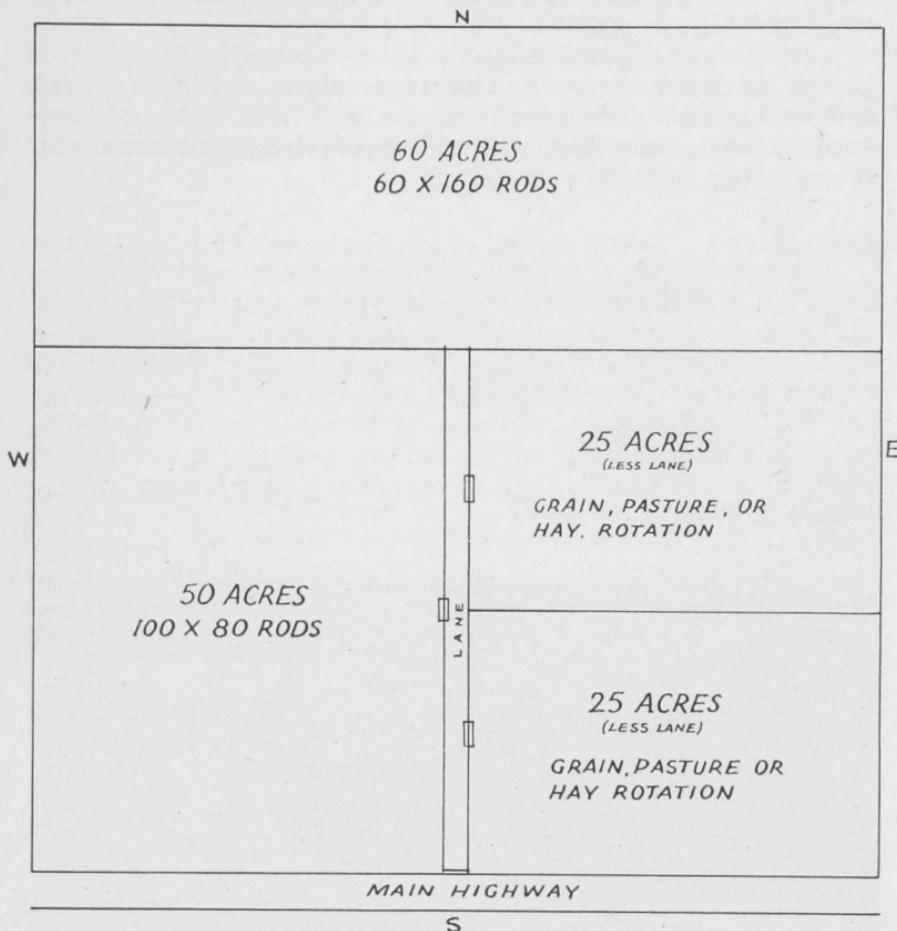
It is not a good plan to have trees along the cross fences on your farm. A few trees along the line fences, and along your farm lane, will not only add to the appearance of the place, but will afford much-needed shade for livestock on hot summer days.

Large Farms Large farms, particularly in the wheat-growing districts of the prairies, would have very different divisions. Half section, whole section and sometimes two section fields would come into such a plan. Even on a very large farm, though, it is a great convenience to have a few comparatively small fields.

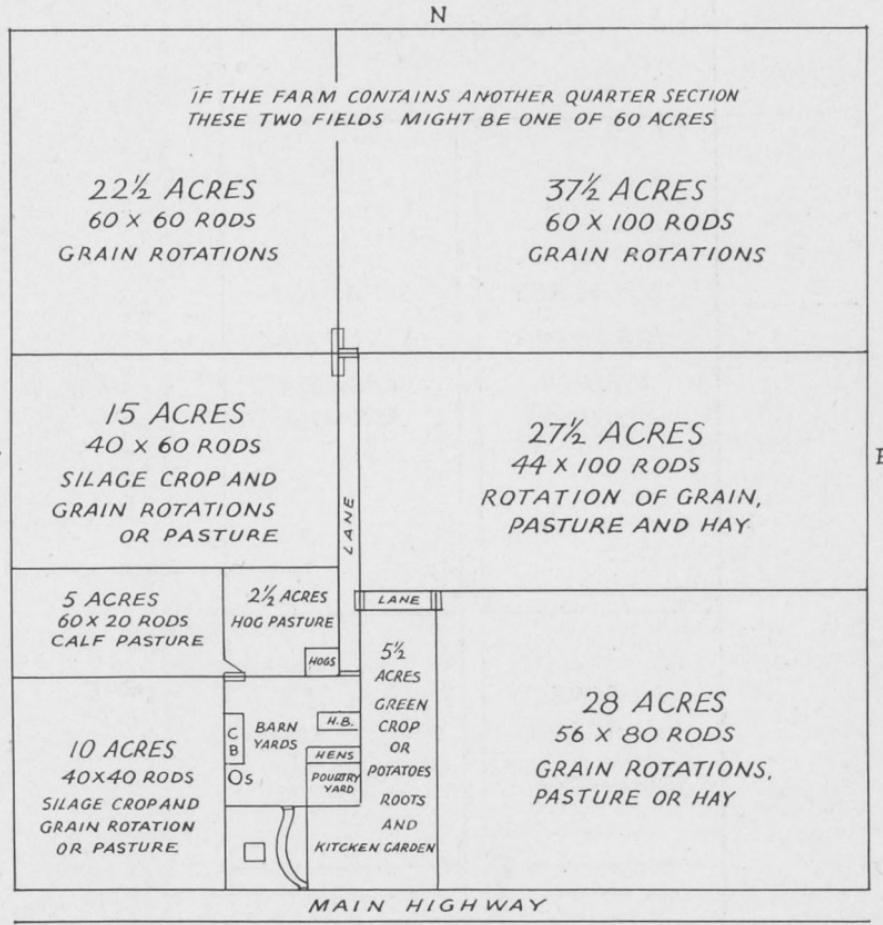
Fields of 40 acres and also of 80 acres, which divisions lend themselves to the survey on the prairies, are often not only a convenience, but a necessity, especially where livestock is kept.



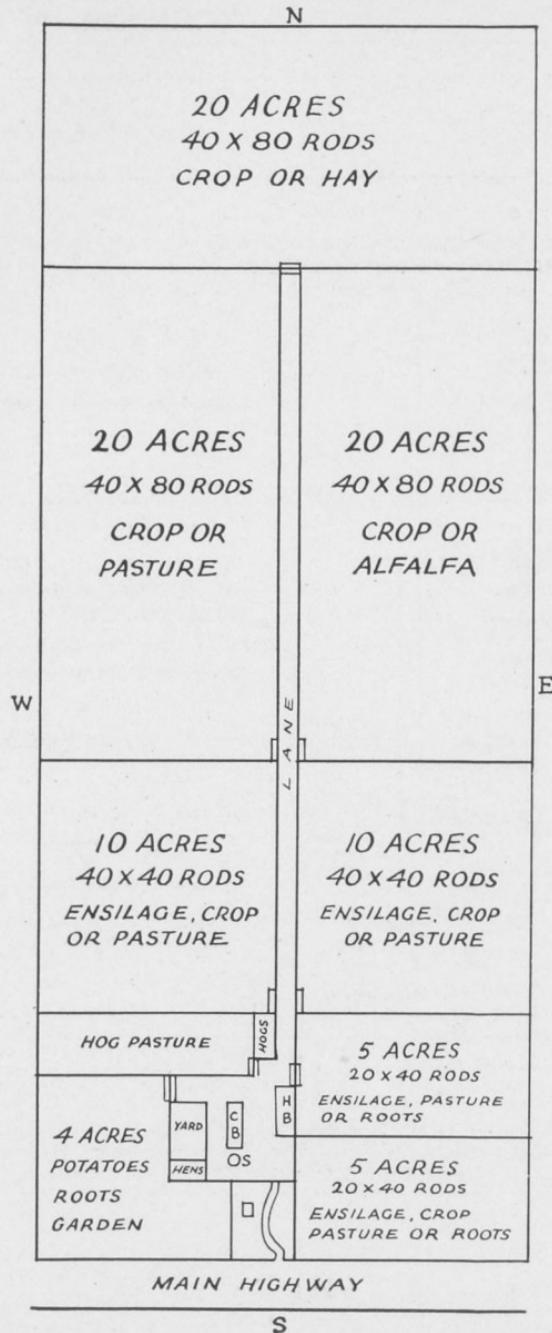
Interior of laying house at Sunny Crest Farm, owned by Jas. M. Scott, of Seaforth, Ont.



Plan of an extra quarter section to make a half section farm with the quarter section on the opposite page. The lane might be placed at the east side and the front 100 acres divided into two 50-acre fields by a fence running west from the lane. This would give three fields 160 rods long and would save time in turning when cultivating.



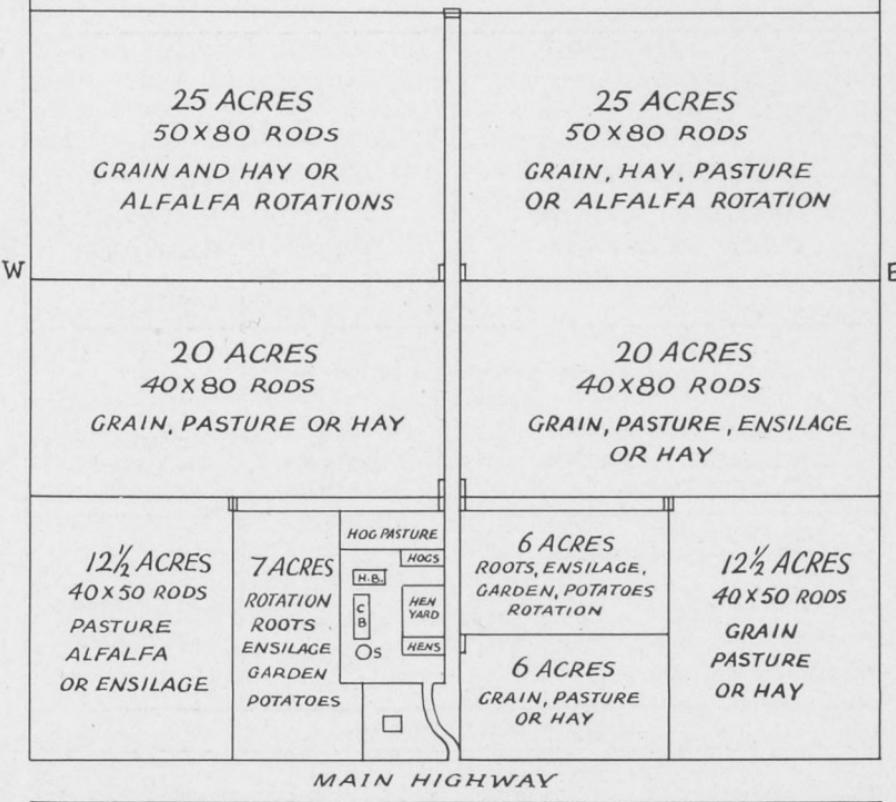
A plan for a quarter section farm. The idea is to give the fields on one side of the lane a fair length for cultivation. (H.B.—Horse barn). (C.B.—Cattle barn). S.—Silo).



Plan of a long hundred-acre farm in Ontario. This farm is 80 rods wide and 200 rods long. This survey is more convenient when the farm comprises 200 acres, as on opposite page. One of the five front fields might be planted as an orchard and used partly for small fruit.

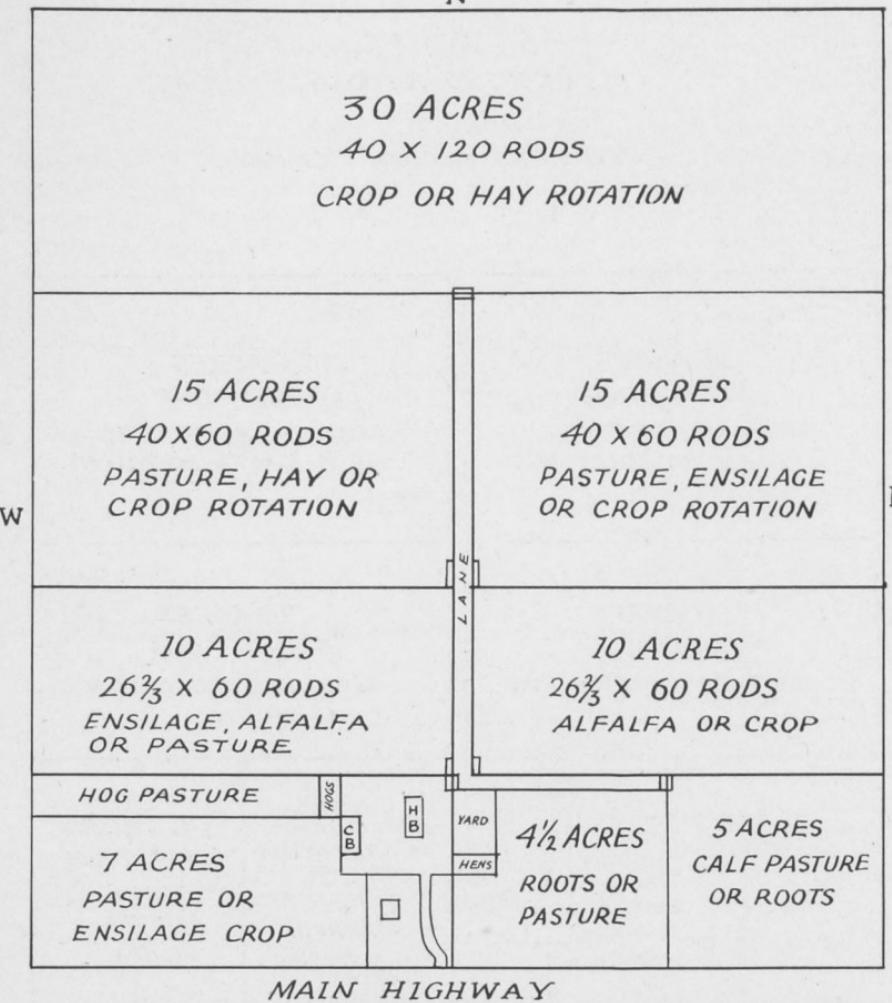
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**60 ACRES
60 X 160 RODS**
GRAIN ROTATION
OCCASIONALLY CLOVER OR HAY



Plan of 200-acre farm in Ontario, comprising two long hundred-acre lots. Frontage 160 rods, depth 200 rods. One of the small fields might be planted in orchard, or partly in small fruits.

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Plan of square hundred-acre farm in Ontario. This farm has a frontage of 120 rods and a depth of $133 \frac{1}{3}$ rods. One of the five smaller fields might be utilized for an orchard and partly for small fruit.

Chapter VI

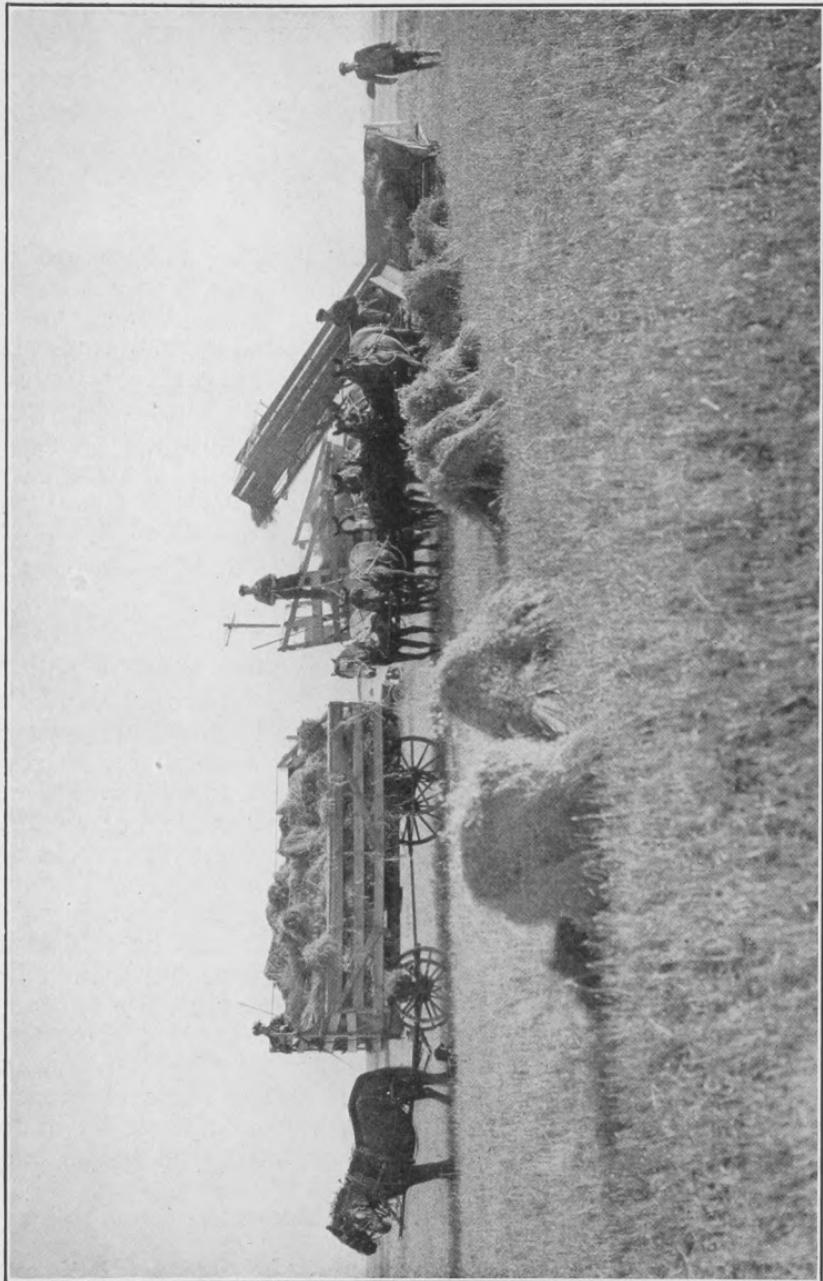
CREDITS AND DEBTS

SEVERAL commissions have been appointed to study "Farm Credits." Voluminous reports have been prepared by them, and some governments have organized systems of farm loans. Whenever a reduction of interest rates is effected these systems have been of advantage to farmers, by lessening the annual burden they have to bear. Wherever such a loan has been the means of consolidating a number of small loans into one debt, with lower interest charges, the results are likely to prove beneficial. There is one feature of such loans, however, that needs to be guarded against; that is the creation of new debts by the availability of money under any system of loans.

Farm Credits Are Debts We very seldom realize that "farm credits" mean "farm debts," and that it would be much better for men on the land to avoid borrowing money except under exceptional circumstances. Crop failures, or some such calamities, at times force farmers to negotiate loans to enable them to carry on at all, but except under these circumstances the best plan for a farmer is to refuse to borrow money.

The exception to this rule is for the purchase of livestock. A farmer who has feed on his farm, which may be sold at a better price as beef, pork or mutton, is always justified in borrowing money to purchase the stock necessary to consume such feed. Even then he should be careful as to the amount of the loan and his plans for paying it off at a definite time. Money might be borrowed to purchase cows, pigs, or sheep for breeding purposes, but it must be done with a due regard to the fact that it has to be paid back, and to the uncertainties of the market.

It is frequently said that men do not make much money



Stook loader on an Alberta farm.

until they get a line of credit, and thus work on borrowed capital. This may be true in some cases, but it is a dangerous plan for a farmer to follow.

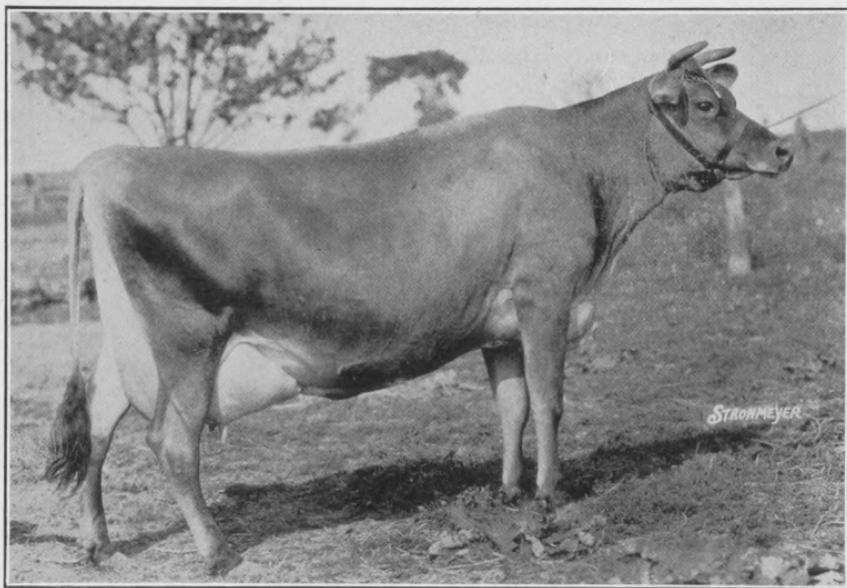
Interest burdens take the independence out of farming and rob the farmer of half his pleasure and satisfaction in the business, and when difficult times come, unless he has extraordinary resourcefulness, he may find himself unable to carry on at all.

The Fear of Debt If more of the farmers of today had the same fear of debt that many of the earlier settlers of Ontario possessed, they would have a great deal more peace of mind. Many of these pioneers never owed a bill. I have known farmers, in my boyhood, who never took home an article unpaid for. They had no "store bills" growing all Summer, to be paid in the Fall. The fact that they paid cash for everything restricted their buying to what they could afford to purchase and reduced the price of what they did buy. Men who are cash customers can always get a discount. These farmers never bought an additional piece of land without having cash enough for a down payment, to make the balance easy to pay, and they never put a mortgage on the land they already held. These men always played safe, and when times of depression came they didn't write letters to the government.

Slow But Sure This will seem to some people a slow method of getting on in the world. It may be, but it is a very safe one. A farm home is too important to the farmer and his family to take any gambling chances with. An occasional plunger may be lucky enough to make profits on borrowed capital, and wise enough to put it securely by when he has acquired it, but he is one in a thousand. The average man will find that money earned in the ordinary way of doing business can be counted upon with greater security than any hoped-for profits from speculations with borrowed funds.

Farming, from its very nature, is gamble enough in itself. The weather, with all its uncertainty, figures in the farmer's profits, and insect pests and livestock diseases will keep him in an element of speculation without adding interest-paying worries to his stock-in-trade.

Buying a Farm It is not always wise to wait until a person has the whole price of a farm saved before buying one. It is frequently a good plan to make your first farm at least partly pay for itself. It is also a good plan to purchase when prices are not too high. It is much better to wait until a boom in land passes, as it always will, before buying a farm for a home. To purchase at the top of the market is to load the family up with a liability for which they get no value.



Saucy Philidora, Reserve Senior and Reserve Grand Champion Jersey Female at 1930 Royal Winter Fair, Toronto. Owned by Wilfrid Duffy, Newmarket, Ontario.

In purchasing a farm be sure you have cash enough to operate it. It is better to reduce your cash payment on the farm than to be short on your reserve for operation. It is the "operation" of the farm that brings in revenue. If you are short in livestock to properly utilize all of your land, you are working at a disadvantage.

Crop payments, or an agreement by which you reduce your indebtedness according to the returns from your farm, is the best plan of purchasing. It is a fair method also, as no farmer can pay if his crop entirely fails from some cause for which he is not responsible. A surplus in your operating account, at a time like this, is of very great value. It may enable you to remain a cash customer for some of the things you cannot get on without. Farming is a business you cannot operate without some cash, and it is a good plan to endeavor to provide the cash necessary for your operation.



Grand Champion Barrow, 1930 Royal Winter Fair, Toronto, Exhibited by Saskatchewan Swine Breeders, Regina, Saskatchewan.

Speculative Farming When you have some money ahead you can indulge in speculative farming, and try out some of the schemes your fancy favors. You can then proceed with the confidence that if your scheme goes astray you are not endangering your farm home.

It is highly important that farming operations should always be on a sound basis, and be completely in control of the farmer himself at all times, eliminating as far as possible the element of chance.

The severe circumstances of many farmers during the past year is an experience from which we can all profit. Farmers are not alone in suffering from the general depression. Mechanics and clerks out of work in the cities are having just as many difficulties to face, but it is with farming we are dealing here.



*Grand Champion Pen of Three Wethers at 1930 Royal Winter Fair, Toronto
Owned by R. B. Hunter, Winnipeg, Manitoba.*

Liabilities Taken on in Good Times It is during prosperous times that we assume most of our liabilities; and later we are usually faced with the problem of paying them off during a depression, when we are, as Burns said:

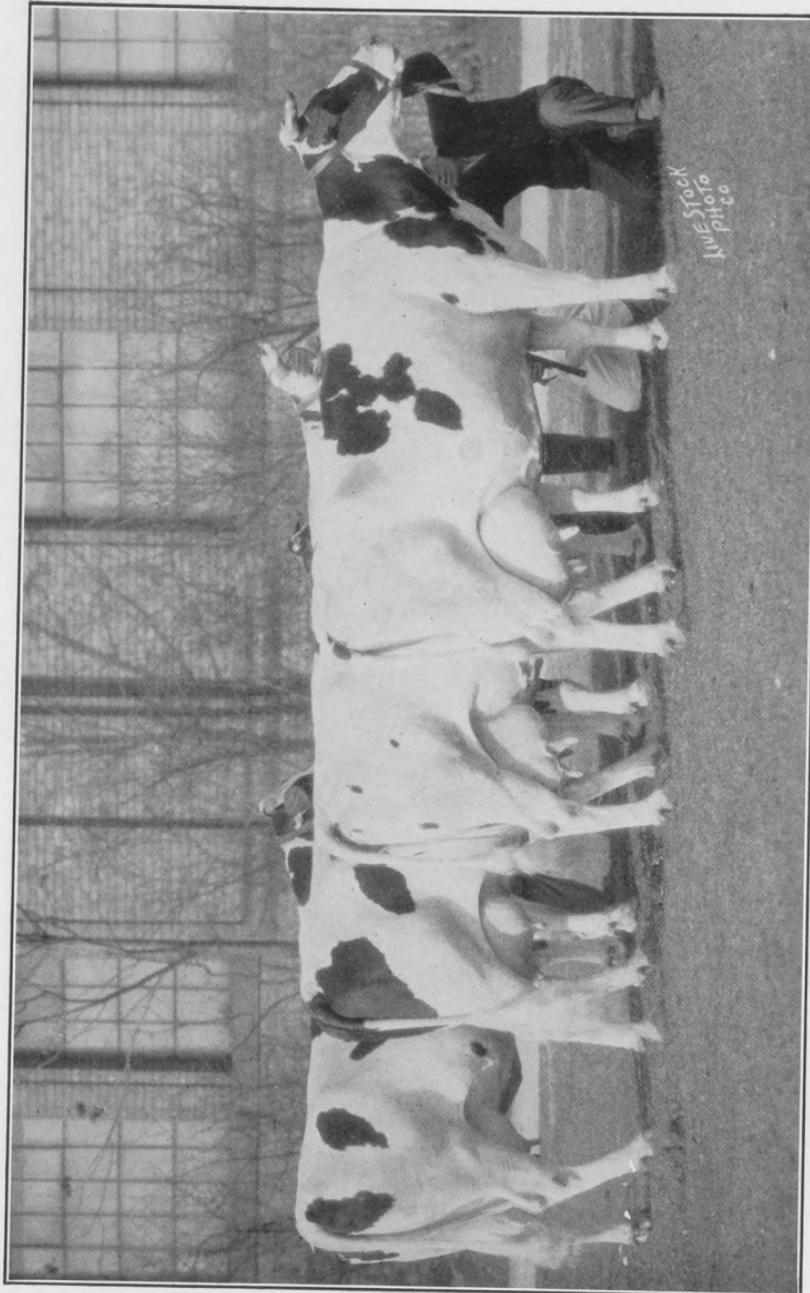
“Doomed to the sorest task of man alive—
To make three guineas do the work of five.”

There is a human tendency to spend freely when large sums are being earned. It is so easy to go on enlarging your business in prosperous times. It is no trouble to get credit and to spread out with little regard to what may happen if prices should suddenly drop and receipts be reduced to a minimum.

If all purchases were made upon profits earned, instead of upon futures, how much safer it would be. It is always easy to be wise after the event, but we have now reached that stage, and we have seen the kind of calamities that can happen to agriculture; and the moral is that we should learn from what we have experienced and avoid the next smash, when in later years it follows the prosperity which is bound to succeed the present depression.



Turkeys on the farm of Wm. Doane, Newmarket, Ontario. This flock numbered eight hundred in the Fall of 1930.



Livestock
Photo
Co.

First Prize Dairy Herd of Holstein-Friesians, 1930 Royal Winter Fair, Toronto.
Owned by A. H. Fair, Kingston, Ontario.

We Should Heed This Lesson When this storm has been weathered, and times are good again, we should take cognizance of what has happened and get our farming operations on a sound basis, within our means. We should use our surplus earnings as insurance against any future depressions that may come along.

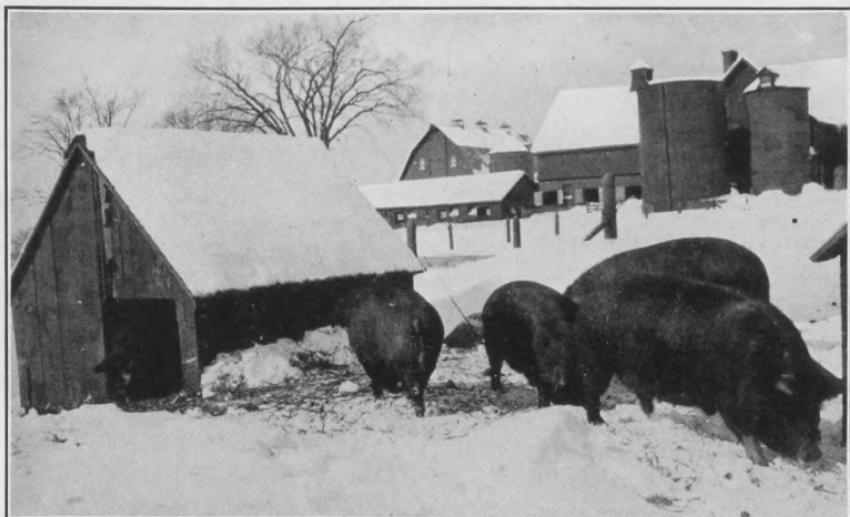
Our great and pressing difficulty is that our capacity to spend seems only to be limited by our ability to earn. This is where grain farming on a large scale often becomes dangerous. A very large cash crop, in any one year, seems to stimulate our purchasing tendencies. Often we add more land, at high prices, to our holdings, hoping thereby to greatly increase our profits; forgetting, in the affluence of the crop just sold, how easily and quickly these profits can turn to losses. When values of farm products drop, high-priced land is the greatest handicap a farmer can have.

We realize today as we never did before, the value of providing against such situations as we are now coming through. It is easy now to see just what provision we should have made had we feared the worst a few years ago. We read stories of barley selling at 10c per bushel, and one newspaper reported it as low as 9c per bushel. We all know it is worth from 40c to 50c per bushel to feed the livestock, but where is the livestock?

Diversified Farming The single crop grain farmer is the one who has suffered most during the past year. Again and again this question of grain farming has been discussed and volumes have been written about it. It is quite natural that some grain farmers resent it, and declare they will not change over. There are prairie districts in Saskatchewan where the lack of water makes it very difficult to keep livestock. There are, in fact, many reasons why grain growing has been the chief pursuit on the Western prairies, and why many wish to continue it.

We are now faced, however, with the fact that only the very strong or the very successful grain farmers can come

safely through the present situation. Whether we like it or not, the only solution seems to be to supplement our grain growing with dairying, feeding hogs or beef cattle, and the keeping of sheep, if we are to make farming a safe and profitable occupation over a period of years.



Wintering Berkshire sows at Central Experimental Farm, Ottawa.

On the farm of Louis Hammner and Sons, near Olds, Alberta, 500 hogs were feeding last October and November on No. 1 Northern spring wheat. These men were confining their sales of wheat, at that time, to this sort of a "home market," and Mr. Hammner figured that he was selling his wheat at about \$1.25 per bushel. This was his way out of a depressed market, and it was a saving way. These men have now on hand 16,000 bushels of wheat, 6,000 bushels of oats and 5,000 bushels of barley. Mr. Hammner says he will try to feed all this crop if he can get stocker cattle and store pigs, and he remarked: "We haven't felt the pinch owing to the hogs."

When I was on Mr. Hammner's farm in October he was feeding 500 pigs and he had only five out of the 500 in his hospital pen. This is good evidence of the kind of a care-

taker he is. Mr. Hammner and his three sons are among the best and most resourceful farmers on the prairies.

Make Plans On Profits Almost invariably, the person who succeeds in any business is the one who plans to have a reserve for emergencies. Every profitable year in any business should make some provision for unprofitable ones that might follow. In no kind of enterprise is this more important than in farming. Money in reserve for operating expenses, when an emergency arises, is vital to successful farming.

Livestock farming affords the advantage of providing more or less continuous revenue throughout the year, and in this way helps out substantially. Receipts for milk or hogs sold are very welcome in the seasons when the grain has all been marketed. Sales of beef cattle may provide revenue for the farmer in the same way.

A herd of beef cattle often gives a farmer a few bullocks to sell at different seasons of the year, bringing in useful cash at times when it is badly needed.

Reserves on Hand In observing successful farmers over a period of years, it is seldom that one will be found with an empty granary or an empty feed loft. A reserve of grain for seed and oat sheaves or hay for feed is splendid insurance on a farm. Once a farmer gets ahead, he should never let his barns get bare of grain or feed.

I asked Andrew Anderson, of Alsask, Sask., one of Western Canada's most successful wheat farmers, what was the most important thing about his farm, and his prompt reply was, "Plenty of feed." I asked him this question on November 14th, 1930, and he informed me that the week before he had just fed the last of his 1928 oat sheaf stacks. "We now have," he added, "all our 1929 and 1930 stacks, and no beast is likely to go hungry about our farm."

If you go into a granary just before threshing time in the Fall and find a bin of wheat, and a good-sized bin of oats, you may be sure you are on the farm of a "fore-handed"

farmer. Nothing is ever lost in such a carry-over. If grain is scarce it will increase in value. If you need it because of drought or hail, it is right on the farm at no cost for purchasing or trucking. If you don't need it, you could not have a better carryover for another year. It gives a farmer a sense of security that is a rare satisfaction.

Farming must be on a sound basis, as free from speculative influences as possible, and free from debt, to give to the people on the land that measure of independence to which they are entitled. Hundreds of men and women have demonstrated that this can be done, and today you meet many farmers who regret the purchase of more land in good years, and the assuming of liabilities that looked quite reasonable then, but are now a very great burden. If the ambition that finds its outlet in the acquiring of more land was directed toward the improvement of livestock, farm buildings, and fences, it would be much safer.



Farm Buildings of Louis Lomenda, Esterhazy, Saskatchewan.

Chapter VII

FARM HELP

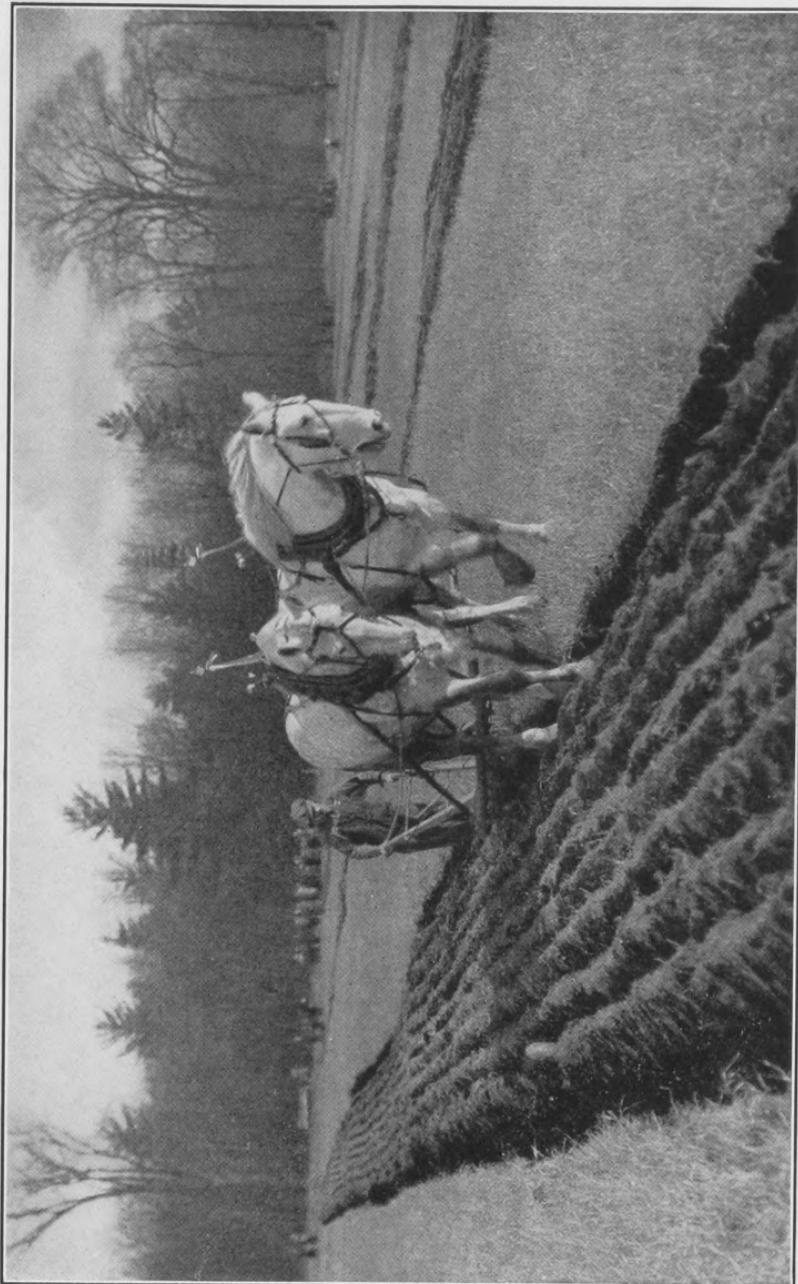
THE problem of hired help is one that has vexed farmers for many years. In a new country like Canada, where most ambitious hired men are making plans to operate farms of their own, and where those who lack this ambition are usually drifters, the problem becomes more complicated.

There is no farm labor class in this country, such as one finds in Britain, and this makes the family-operated farm the one most satisfactory. When a family is able to do most of the work on a farm, the results are bound to reflect their proprietary interest in the business, and the labor problems are solved in a very satisfactory way.

Work Hours On the Farm The toil of the pioneer farmer seems to have created the impression that farm laborers have to work long days; that they begin before sunrise and work "far on into the night." This is a very great fallacy. It is true that during seeding and harvest farmers work long days, but there are other periods of the year when the hours of daily work are much fewer in number.

Calculations have been made as to the working hours on farms, and a census covering a number of farms has shown that throughout the year they will average from nine to just under eleven hours per day. There are some kinds of farm work that entail long working periods in a day, but with respect to these, reasonable provision can be made.

Keep Your Men Employed One of the serious losses on farms is caused by the lack of planning work for the men employed. The farmer who has not made definite arrangements for the tasks that each of his men must undertake, immediately that man has completed the



A farmer's team at the International Plowing Match, Stratford, Ontario.

one he is engaged in, will suffer a loss in labor that will seriously affect his profits.

There are days when the weather does not permit of outdoor work, but there is plenty of indoor work calling for attention, and the farmer who sits around and allows his men to idle on such days is bound to be the loser. Farm hands, engaged by the month, expect to work every day and are paid to do it. No business can stand the payment of wages unless it gets earned returns for the outlay.

Plug up this labor leak on your farm by business-like methods of arranging your work so everyone employed will be going full time. It is the only way you can keep your premises neat and tidy and your work right up to the minute.

Keep Ahead Of Work A farmer must not let his work get ahead of him. The man who is always one jump behind his farm work is invariably the loser. Put on force enough to catch up if you get behind, and then keep up with the procession. Plan your work so that you are not undertaking more than you can accomplish. One of the advantages of a tractor is that at times you can work an extra shift and so keep your farm operations well ahead.

Interested Employees Farm workers who take an interest in their employer's operations are always the best. When you get a man who is keen to keep ahead of the work, and who gives intelligent attention to every task he undertakes, pay him a little more money. He is well worth dealing generously with. When you get a man who has only two objectives, sundown and payday, let him seek some other kind of employment, as the farm is no place for him.

As to whether you have a separate house for a hired man and so engage a man with a family, is a matter for each farmer to decide. The kind of farm operations you are engaged in will determine this to some extent, and there are a great many things to be taken into consideration in deciding such details of engaging farm help.

Wages Paid It is impossible to set any definite scale of wages for farm help. The efficiency of the man counts for a great deal. A man who can operate a tractor satisfactorily is often in good demand and his earning power may justify higher wages.

A man who is competent with horses is also appreciated about a farm. If he can break colts without teaching them bad habits, and get them working quietly and efficiently without breaking their spirits, he is worth having.

The man who knows how to fit the collars on his horses, and who will give such attention to them as to avoid sore shoulders during spring seeding, is a treasure about a farm. Such men are to be found everywhere, if they are carefully looked up, and they deserve the best of treatment, good sleeping quarters, good food, and good wages.



Georgina of Aberlour 5th, Grand Champion Aberdeen-Angus Female, 1930 Royal Winter Fair, Toronto. Owned by Geo. McAllister & Sons, Guelph, Ont.

Method of Payment If a farmer is engaging a man for a year, he would be well advised to arrange payment by the month, and to pay higher wages per month during the busy season than in slack times. A flat rate of so much per month during the year round is a mistake. It is only natural for any employee to feel that he is not overpaid; therefore, he is likely to consider his winter wage as only a fair amount per month, and when the busy days arrive, his average monthly wage for the year, being below the current monthly wage, he then becomes dissatisfied. Always pay a higher monthly wage during the period from the beginning of seeding until the end of harvest than during the rest of the year.

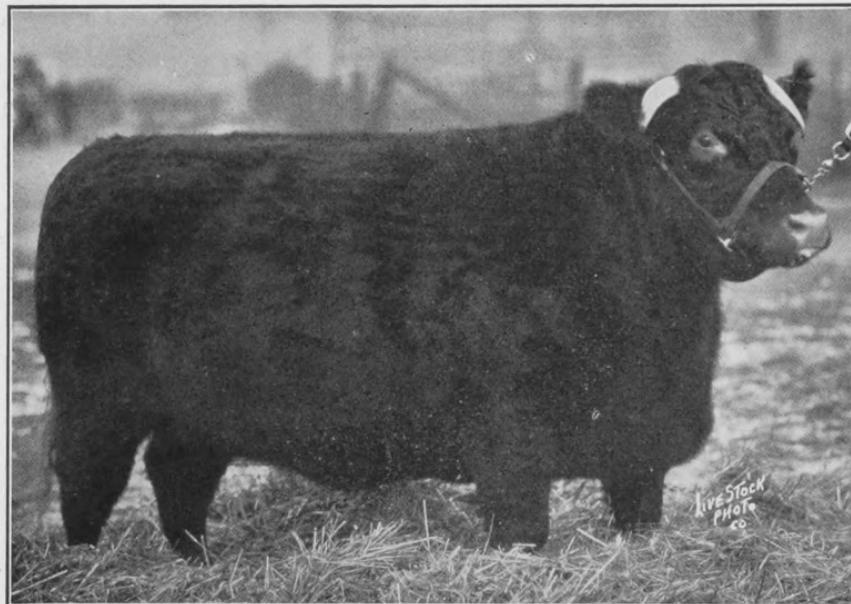
Profit From Labor In engaging employees on a farm a careful calculation should first be made of the earning power of extra help. There is no point in increasing expenditures unless some profit can be made out of the investment. If a farmer is going to add to his working force, he should be as nearly certain as possible that the man he engages can at least earn his wages, and an equal sum each month for his employer. In grain farming the earnings should be much larger than this. The small farmer, whose cows, pigs, and poultry may form a large part of his income, should not engage help unless his farm operations will guarantee that the additional help will mean additional profits, and that the wages bill will not mean a reduction in his ordinary farm income, but rather a substantial increase in it.

Family Help The most profitable help that a farmer can have on his farm is the help of a growing family. These boys and girls can greatly aid in the reduction of costs on the farm by assisting before and after school hours and during the holidays.

Work of this kind is a valuable experience for these boys and girls. To understand how food is produced on the

land, and how the great basic industry of agriculture is operated, will be of untold value to them. Work such as this enables young people to form habits of industry that may later be the foundation for their success.

Dairying, hog raising, and poultry keeping lend themselves effectively to a plan for utilizing the family labor, and can, in this way, become a useful means of augmenting the farm income. Young people can be interested in this kind of work to a much greater extent if accounts are carefully kept to show exactly what the product of their work amounts to. Being of substantial help to the home is very gratifying to any person interested in it, and if the figures show definite profits from what these boys and girls are doing, they will have a much greater interest in their work, and also some real incentive to improve their part of the farm business until it shows a greater profit.



*Lady Rosewood 8th, Grand Champion Shorthorn Female, 1930 Royal Winter Fair
and Canadian National Exhibition, Toronto. Bred and owned by
James Douglas & Sons, Caledonia, Ontario.*

Chapter VIII

HORSES AND TRACTORS

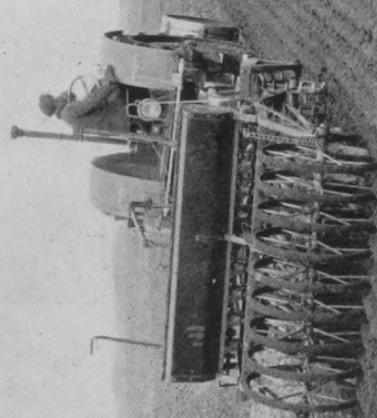
THERE is always likely to be some difference of opinion as to whether a farmer should operate with horses or tractors. It is not a question that can be settled in any dogmatic fashion, and must be a matter for individual decision. Both kinds of farm power will be found effective and useful.

Some Tractor Experiences Mr. Justice Mitchell, of the Alberta Supreme Court, farms two sections of land near Gleichen, Alberta. Mr. Mitchell is naturally fond of horses. For upwards of twenty years he owned and operated a horse ranch near Medicine Hat, Alberta. He gave his horses a good deal of personal attention and bred a splendid class of useful farm chunks and draughters.

In the Spring of 1930 Mr. Mitchell had one hired man who favored horses for farm work, and to him was assigned a six-horse team, every animal of which was fit for its work. His other farm worker was a competent tractor operator; so that each man was working, from choice, with the kind of farm power he preferred.

The man with the horses was able to get on the land exactly one week earlier than the tractor operator, so that in this week he not only got some work ahead, but his horses were hardened for good steady work.

These two outfits worked steadily during the spring seeding in a sort of friendly rivalry as to whether horses or gasoline power was the most efficient for farm work. At the completion of seeding operations a careful estimate showed that the tractor, working one week less than the horses, had accomplished, during this period of work, just twice as much as the horses.

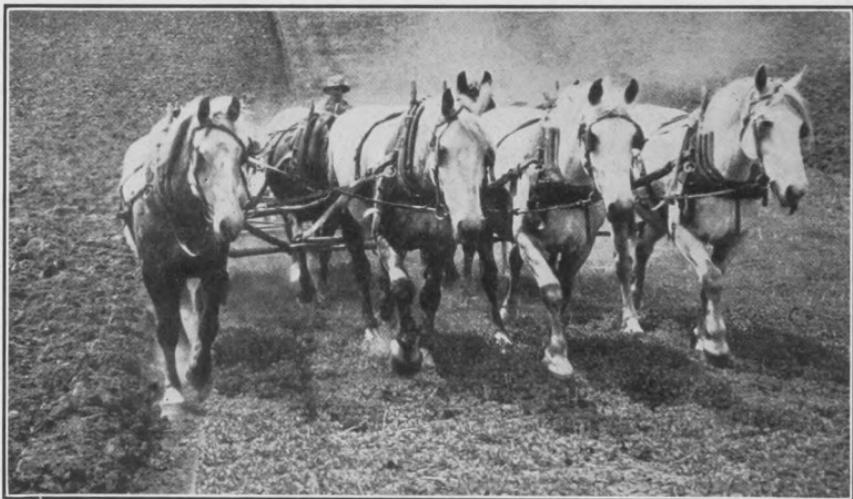


Harold McLaughlin, of Spruce Grove, Alberta, cultivating and seeding. Mr. McLaughlin is a graduate of the University of Alberta in Arts and Agriculture, and a successful and progressive farmer.

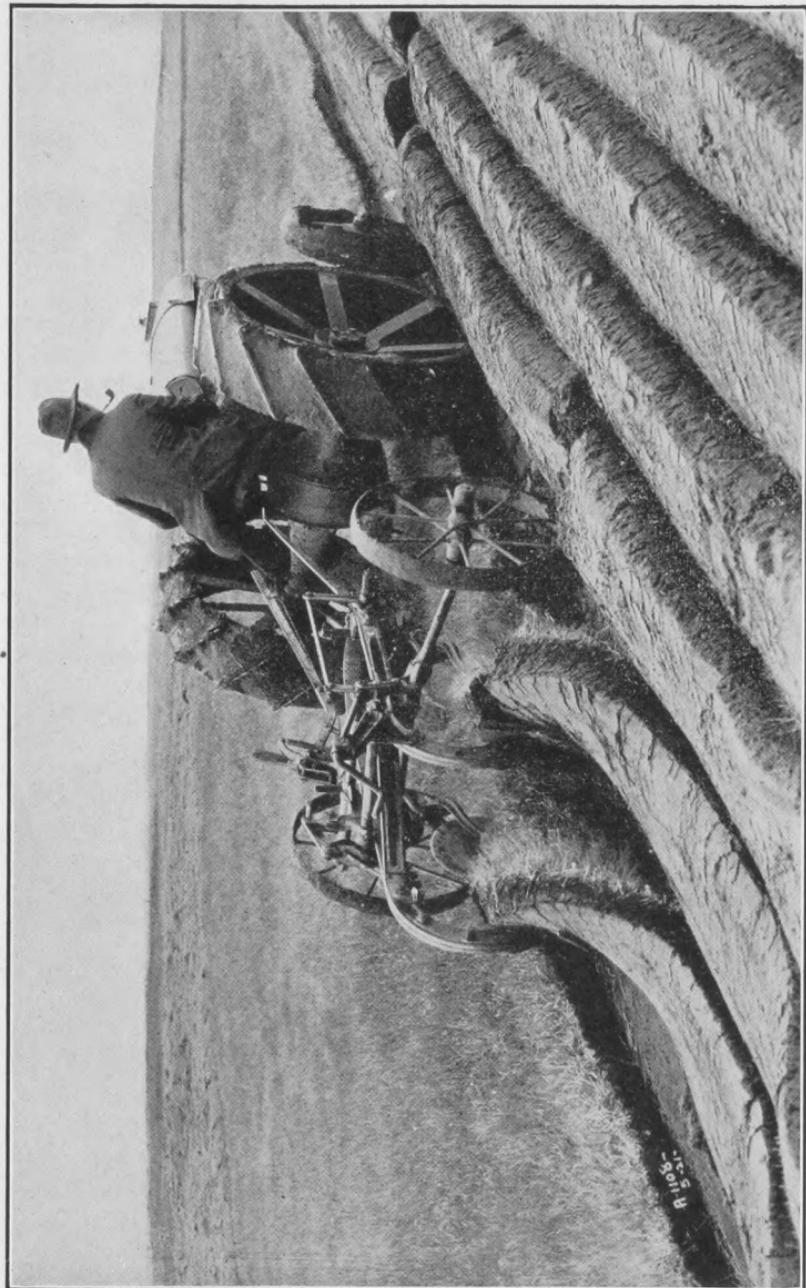
The tractor worked longer days than the horses, but the operator of the engine did not work any more hours than the man who drove the horses, fed and harnessed them in the morning, and cleaned and fed them at night.

This would be a very fair test of getting work done quickly. Mr. Mitchell naturally requires to hire all the work done on his land, and must count the actual cost of every operation. The result of last spring's experience is that he has purchased another tractor to speed up work in seeding and summerfallowing, but on account of the present price of feed is keeping a horse outfit as well. In working a summerfallow crop of 480 acres, last year, they found that under favorable conditions the tractor did about two and one-half times as much as their six-horse team. The land is a friable loam and easily worked, so the load on horses plowing is not heavy.

The fuel bill for the tractor work on this farm amounts to \$425.44. No detailed account of the cost of feeding the horses has been kept, but twenty-five acres was used for growing oats and green feed for the horses. They have also



This is not Ben Hur's chariot, but it's raising a stour just the same.



Turning prairie sod effectively.

been provided with some pasture in Summer, and have the run of the straw stacks in Winter. The depreciation on the value of six horses would about equal that of the tractor, as there is always the chance of a horse dying. With feed at ordinary prices, Mr. Mitchell is firmly convinced that on his land and for his method of farming the tractor is much cheaper power than horses.

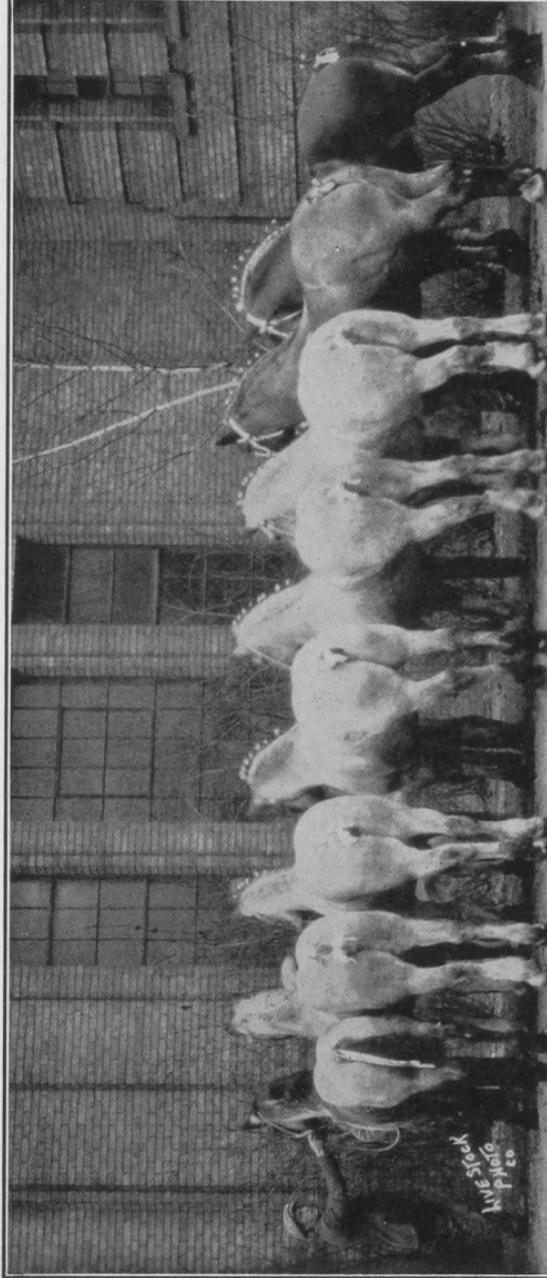
In a recent communication, Mr. Justice Mitchell informs me that he is going to breed and feed hogs, both as a means of marketing grain and giving steady employment to his men during the whole year. His wheat-farming operations have been very successful over a period of years.

Horses Have Their Place With feed as low-priced as it is at present, and with a great many men capable of handling horses, and having little knowledge of mechanics, horses are not likely to soon drop out of farming. Horses can be purchased at very reasonable prices just now, and farmers who have feed on hand, or can secure it conveniently, are likely to use horse power mainly in their work this Spring.

Farms of small acreage can use horses conveniently and inexpensively if pasture can be cheaply provided in the Summer. Farms that may be classed as four- or six-horse farms will hardly justify the purchase of a tractor unless under exceptional circumstances.

Where some member of the family is a competent mechanic, to operate and care for a tractor, and where the investment does not mean an added debt, a tractor will speed up operations at critical periods, reduce the labor in the fields and help to keep ahead of the work. If it is cared for properly it will last for a good many years.

Keep Horse Costs Down Quite often on large farms horse costs are far above what they should be. On farms where sixteen horses are required to do the work, we often see twenty-five or thirty running about the fields,



Belgian horses from the Province of Saskatchewan, at 1930 Royal Winter Fair, Toronto.

Stock
live photo
co

six or eight of which are kept for no purpose except to consume feed. For one reason or another they are worthless in harness.

Andrew Anderson, of Alsask, Saskatchewan, in an address on "Farm Management," delivered at the University of Saskatchewan, made the following very pertinent comment on the surplus horses to be found on prairie farms. Mr. Anderson farms largely with horses, using only one tractor, and still favors equine power. Under the heading of "Power," in this address, he said:

"Whether we believe it to be for the betterment of agriculture or not, the fact remains that we are living in a mechanical age and that mechanical power will be used more than ever on the farm.

"However, the horse is still the dominating factor in farm power in the West, and I am going to confine my remarks to it only. When it comes to horses, the average western farmer is like a drunken sailor, the more the merrier, quite regardless of the economic loss, which is enormous.

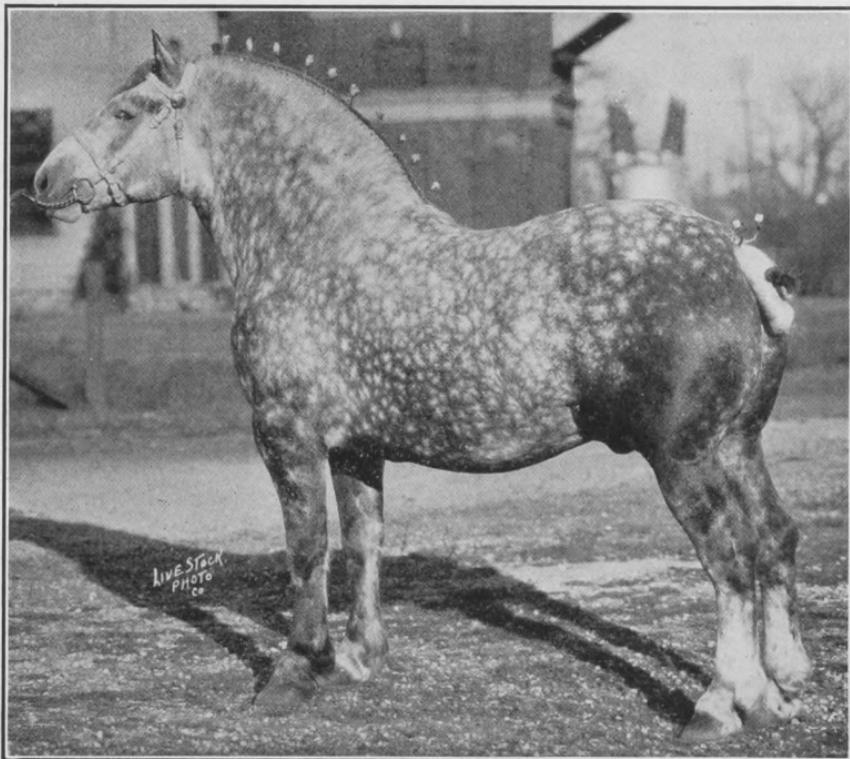
"I am positive that we have in the West over twenty-five per cent. too many horses, not too many good work horses, by any means, but just horses. When travelling in the West you see thousands of worthless horses, some young, undersized runts, others misformed or badly put up—and some old, that have seen their best days and are now worthless.

"Just stop to think of this enormous waste of feed and pasture, and how much good stock could be raised in place of these useless horses. Is there anything more pitiful to see than what was once a good, faithful friend to man, now a mere skeleton, standing at an old straw stack, waiting for death to relieve him from his misery.

"Tomorrow, when you take an inventory of your horses, take a gun with you and send what was once 'good old Dobbin' to the happy hunting-grounds, and the worthless young creatures to—any old place. If you do, you can go

home, knowing and feeling that you have done one good act to the horses, to yourself and to the community at large."

Useful Horses There can be no doubt about the value of useful, able horses on the farm. Trying to work an eight-horse team with a couple of cayuses pulling against good, solid farm chunks of about 1,450 pounds each,



LIVE STOCK
PHOTO CO.

*Dean, Grand Champion Percheron Stallion, 1930 Royal Winter Fair, Toronto.
Exhibited by C. M. Rear, Regina, Saskatchewan.*

makes a very unsatisfactory hitch. Horses should be mated in size and temper. One or two horses in a big team, fretting themselves into a lather of sweat and annoying all the rest, does not make for efficient results in the day's work. It is of the greatest importance to have horses all of the same temper in a big team. In some cases teamsters are to blame for the excitability of horses in such a team, but in these days it is very difficult to get drivers with patience enough to study the temperament of horses and humor them into docility. It is much easier to secure horses that are quiet and not easily excited. You will get much better results from such teams.

Horses Conditioned And Cared For Horses should be conditioned for their spring work. They probably run out during the Winter, especially in the West, and unless they are taken in a few weeks before work on the land begins and fed some grain, they will not stand hard work.

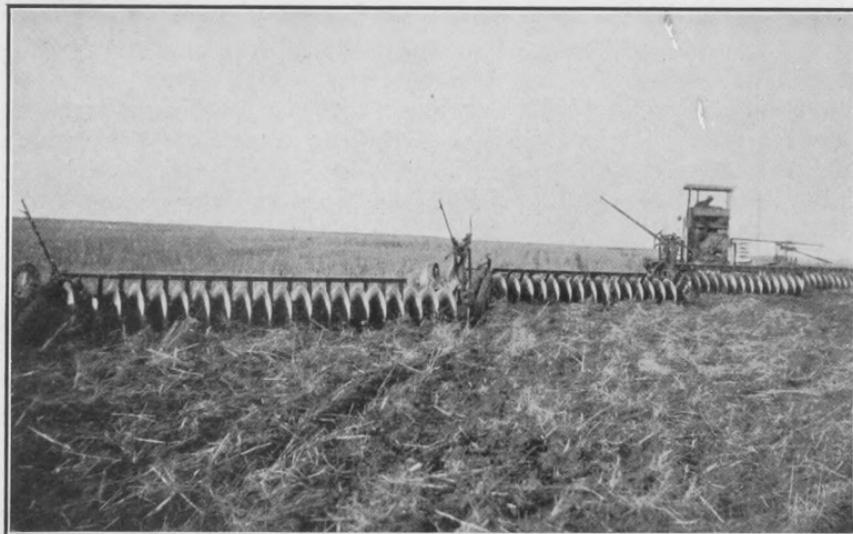
They should be used at light work first and the collars fitted carefully, so that the work will not be hindered by sore shoulders after it has got into full swing. Harness should also be repaired and fitted, as it makes work much more comfortable for horses if the harness is buckled so that it does not chafe, and so arranged as to give the horse the greatest amount of comfort in pulling its load.

Horses working hard on the land in seeding, when the ground is usually soft, should have the best of care. Just as it pays to use liberal amounts of the best grease and oil on your tractor to make it run smoothly and lengthen its life, so the best of care for your horses will increase their working ability and lengthen the years of their usefulness on the farm.

What One Man Does There are many cases where farmers who are skilful with machinery are making a decided success of farming with mechanical power. Tractors and combines are filling an important place in

these men's operations, and are enabling them to accomplish tasks that some years ago would have been regarded as impossible. I consider myself very fortunate in having the consent of a successful young power farmer to publish the results of his operations, which have been almost single-handed.

Power Farming Robert Gratz, of Nobleford, Alberta, uses no horses on his farm. When he requires odd jobs done to which the tractor is not adapted, he hires a team from one of the neighbors. He is now farming 1,120 acres, of which 1,075 are under cultivation, and doing all the work on it with one thirty horsepower caterpillar tractor, for which he paid \$3,700. Last year he had 713 acres in crop and 362 acres in summerfallow. His fuel bill amounted to \$1,280, but his labor costs only amounted to



Tractor pulling four ten-foot one-way disc plows at 3.60 miles per hour, on the farm of C. S. Noble, Nobleford, Alberta. This outfit will cover 175 acres in a ten-hour day.

\$421. This was fortunate in the year 1930, when labor costs needed to be reduced.

This means that with an outlay of only \$1,701, plus his own labor, he cultivated 1,075 acres, and seeded, harvested, and threshed the crop on 713 acres. This is cutting costs of operation with a vengeance.

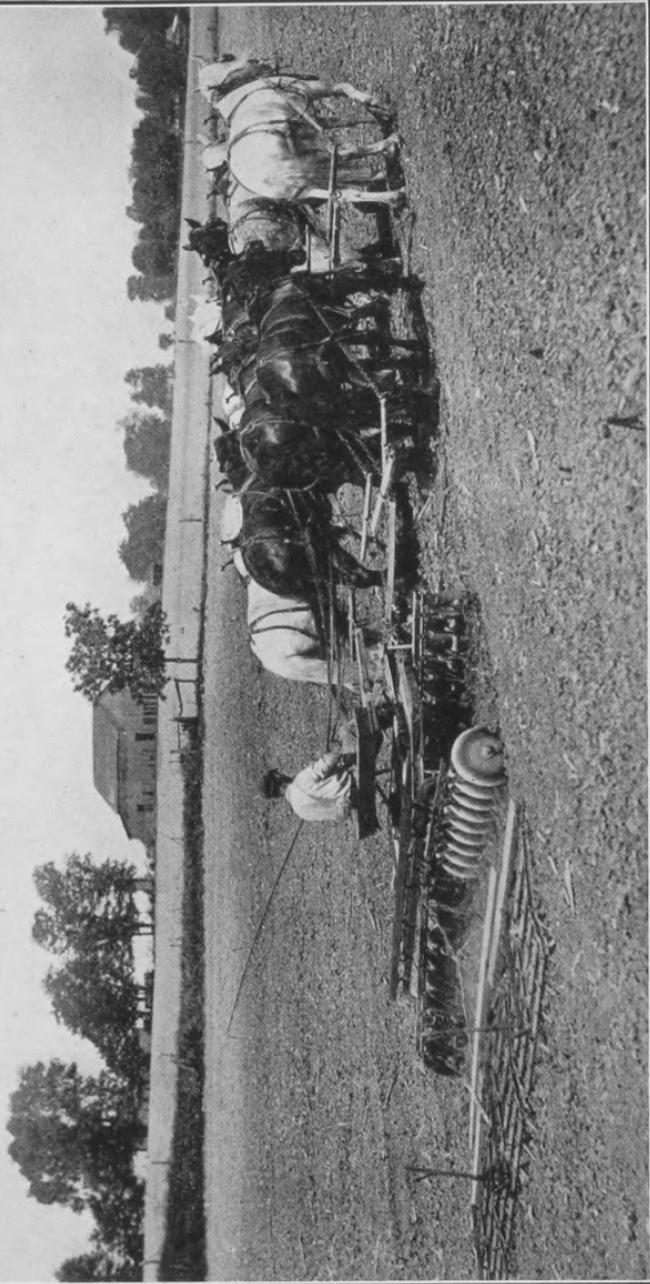
It must be kept in mind, of course, that Robert Gratz is resourceful, strong, able, intelligent, and educated. He probably plans a maximum of work for himself and gets it done. He has a genius for machinery and keeps his implements in first-class condition so they are always ready for a full day's work.

It might be interesting to note the stock of implements, and their cost, that this young man finds necessary for his farm operations:

Caterpillar tractor	\$3,700
Combine harvester	3,880
Truck	1,280
Seed drill	365
Cultivators	389
Rod weeder	250
Disc for tractor	420
Land packer	150
Motor car	1,026
Tools	100

	\$11,560

Mr. Gratz has not been plowing for some years, but his intention this year is to purchase a plow for use on his summerfallow. He figures that plowing will reduce costs, as he will not be required to do nearly as much cultivating. He is a clergyman's son and was, therefore, not brought up on a farm, but he is a graduate of the Olds School of Agriculture, and an undergraduate of the University of Alberta. Readers of "Field and Farmyard" and "Weed Control" are already acquainted with Mr. Gratz.



An Ontario farmer speeds up his cultivating.

The section and three-quarters of land which he farms cost him \$35,840, which is an average of \$32 per acre. The land was fenced, but had no buildings on it, and had been growing wheat for a considerable period of years before he purchased it.

Some idea of the results of Mr. Gratz' farm operations can be gained from his statement of 1929, which he kindly gave me. His costs of operation were:

Wages and board	\$1,105.00
Gasoline and oil	1,204.80
Taxes	380.00
Repairs to machinery, blacksmith acct., etc.	335.00
Hail insurance	1,202.00
Insurance	40.00
	<hr/>
	\$4,266.80

He sold wheat to the value of \$15,293.50, getting an average price of about \$1.05 per bushel. His gross statement would then be:

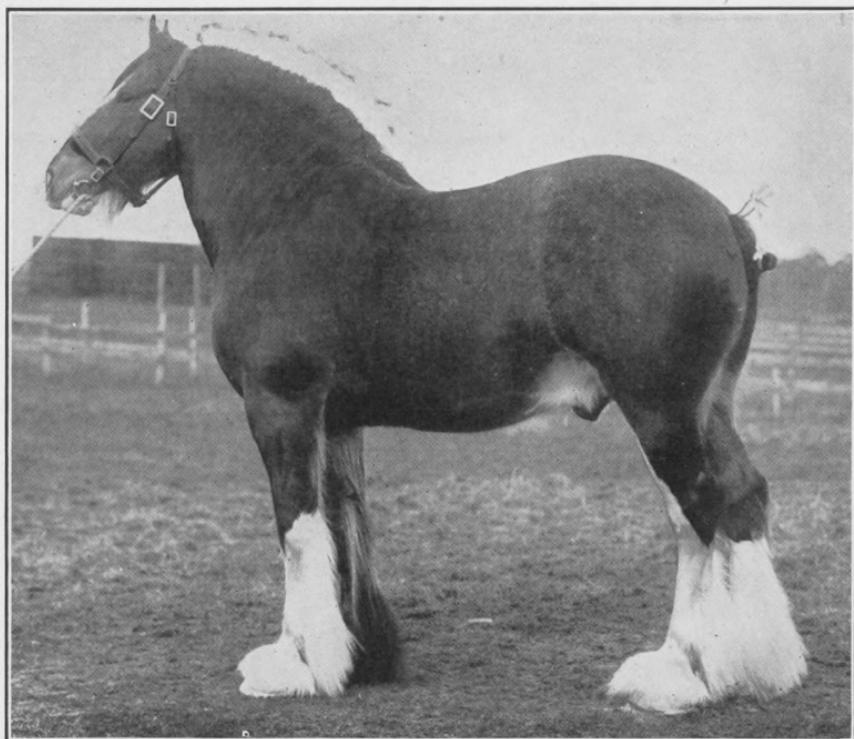
Receipts	\$15,293.50
Expenditures	4,266.80
Cash balance	\$11,026.70

He has an interest charge on his mortgage to meet and is entitled to a dividend on his whole investment in land and implements. When his mortgage is finally paid this dividend will all be retained as income, but it is now, as it will be then, farm earnings. Being able to declare a dividend in any business is a sign of prosperity and part of its income.

Thus we have:

Dividend of 6 per cent. on investment in land and implements	\$2,844.00
Labor income for owner	8,182.70
Total income	\$11,026.70

This is the sum earned in dividend and labor income by Mr. Gratz and his wife (who does her part well) for the year 1929. It will be seen they have a prosperous farming enterprise, conducted by a man who is very capable in his business and understands farming with machinery.



*Benefactor, Grand Champion Clydesdale Stallion at 1930 Glasgow Stallion Show.
Benefactor has won all the Show Yard honors in Scotland, and is now
the greatest breeding Clydesdale stallion of his day.*

*Chapter IX***GRADE LIVESTOCK**

THE great majority of farmers do not breed pure-bred livestock. They content themselves with the production of non-pedigree farm animals. Even in countries like Great Britain, where work for the improvement of livestock has been going on for almost two centuries, and where pedigrees have been recorded for over one hundred years, we find the breeders of grade livestock far outnumber those of pedigree animals. The keeping of records for registration purposes is regarded as a considerable task by some farmers and often deters them from breeding pure-bred animals. There is also a well-established opinion that pedigree stock requires more care and feed than common beasts. This is a relative matter only, as you will find that most animals will respond to feed, but pedigree animals will not look like pure-bred ones if half starved.

Commercial Animals There is the farmer, and he belongs to a large group, who breeds farm animals entirely for market purposes. His cattle are for beef, his hogs for pork, and his sheep for mutton. He wants good animals, easily fed and finished for market, and he is only concerned in breeding the sort of animals that will supply him with the quality of products his market demands.

This farmer wants early maturity, and good fleshing qualities in his cattle and sheep, and in his hogs the type that makes high-class bacon. If he is breeding the young cattle which he will later fit for market, he will be anxious to improve the quality of his herd. This he can do most effectively by a judicious selection of pure-bred sires.

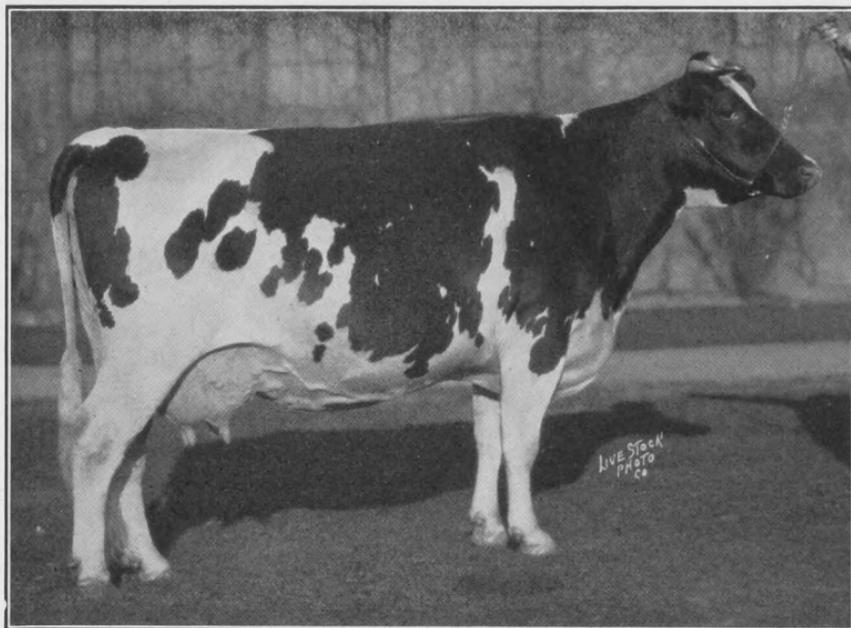
Steady Improvement Such a farmer will have a definite plan of improvement to follow. He will select his sires with a view to having every crop



Sparrow Ranch, southwest of Calgary, owned by H. H. Gilbert.

of young stock a decided improvement upon the females from which they were bred.

It is no easy task to accomplish this, and it is only by the exercise of mature judgment and skill in the selecting of sires that he can bring about the desired results. This work of improvement will tax the ability of the farmer in a most interesting and important way.



Triune Papoose Piebe, Grand Champion Holstein Cow, 1930, Toronto Royal Winter Fair. Owned by Mount Victoria Farms, Hudson Heights, Quebec.

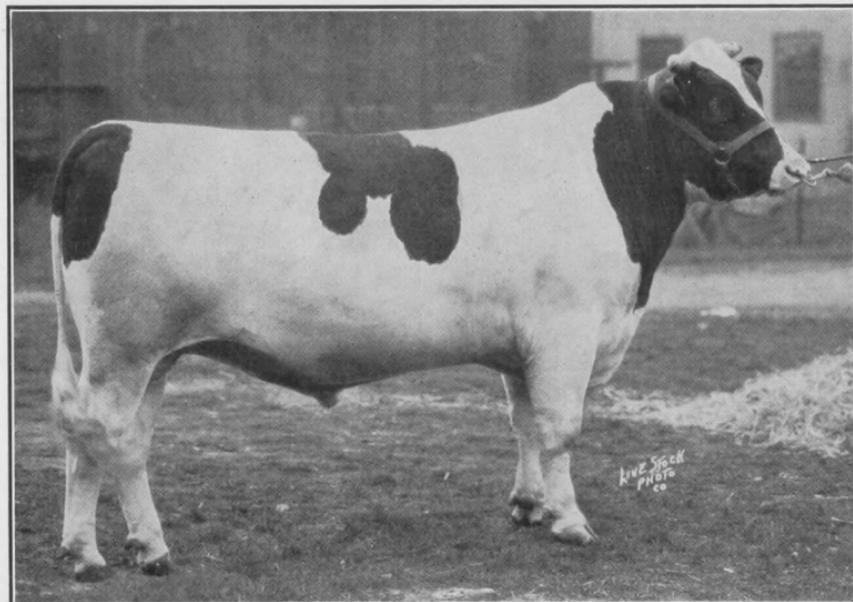
Dairy Cattle The improvement that has been brought about in the dairy herds of Canada, during the last twenty-five years, is the best evidence of how agriculture can be improved by careful selection of sires.

In the last five years the average annual yield of milk from cows in Ontario has been increased from 4,000 to 4,500 pounds. The improvement in single herds, however, has far

outdistanced this. By culling out low yielders, and using bulls with heavy milk records behind them, the profits from many dairy herds have been increased in a remarkable manner.

A Good Grade Herd

In 1921 a buyer from Western Canada made a trip to Ontario to purchase a train load of dairy cows for prairie farms. In buying these cows he visited the farm of W. J. Mulloy, in the County of Dundas. This farmer was milking twenty cows, all Holstein-Friesian grades, and his cheese factory checks showed that he was selling slightly over 1,000 pounds of milk per day. The cows were all in full flow on a good pasture. Cows were then selling at from \$60 to \$75 each, with an odd animal of extra quality bringing \$90 or \$100. The latter prices were not very common.



Montvic Pabst Ragapple, Junior Champion Holstein-Friesian Bull at 1930 Royal Winter Fair, Toronto. Owned by Stevenson Farms, Alliston, Ontario.

The Western buyer asked Mr. Mulloy for a price on a choice of five cows out of the twenty, but the request was promptly refused. These cows were not for sale. An offer of \$100 each for five was refused. Finally the buyer, in an effort to get a few of these good cows, offered \$150 each for a choice of five out of the twenty. Mr. Mulloy finally consented and the sale was effected. This Ontario farmer had the satisfaction of selling the five highest-priced grade dairy cows that had, up to that time, ever changed hands in his neighborhood; every one of them bred by himself. He would not have sold these cows only he had a group of heifers from them coming into profit the following season.

The twenty cows in this herd had all been bred on this farm by the process of culling out the low producers, and selecting good sires for improvement in milk production. Few breeders of pure-bred cattle have accomplished more than this farmer with his grades, and he had satisfaction, as well as profit, in his work. This was a real achievement in cattle breeding, and is the sort of work that gives a strong incentive to the next generation to carry on.

**Results For
The Purchaser**

In this case we see a satisfied salesman, but what about the purchaser? These five cows were taken West, put on a good farm, and when they freshened were well fed, and in the succeeding twelve months they gave the following yields of milk respectively: 17,269 pounds, 14,689 pounds, 14,449 pounds, 14,331 pounds, and 10,940 pounds, making a total of 71,678 pounds for the five cows, or an average of 14,335 pounds each. It needs very little figuring to prove that the purchase of these cows was a profitable investment, and every heifer calf they dropped was a decided addition to their owner's herd.

What this Dundas County farmer did in building up his herd of grade Holstein cows can easily be done by any intelligent and ambitious man on a farm. It is comparatively easy to secure, at a very reasonable price, a bull calf of one of the dairy breeds, with excellent records of performance in his pedigree. Every farmer who is breeding for milk should take the time to look up a prospective herd sire such as this. It is the way to improve your cattle.

Dairy bred bulls are usually plentiful, as there are no large herds of range cattle to absorb them, as is the case with the beef-bred bulls, and a good calf of approved dairy breeding can be secured by reasonable effort, and at a price that any farmer can afford to pay.

Weigh the Milk From Your Cows The first thing that will stimulate improvement in a dairy herd is the weighing of the milk and testing for butter fat. This means but little extra work and is the only means by which a farmer can positively determine what cows he should keep.

Results are the only thing that count in any business producing a marketable product. If any unit of a factory fails to turn out its share of finished articles, it is either improved or scrapped. A dairy cow is one of the most direct methods of producing a cash income on a farm. There is a wide difference in the capacity for production in cows. Some will not pay for their keep, others will show handsome profits. The method of determining the superiority of one cow over another is so simple that it is frequently neglected.

Any attempt to decide this matter by simply observing the amount of milk each cow gives is too indefinite to be of much, if any, value. Very poor milkers, that give small amounts, and only for short periods, should be got rid of at once, but weighing and testing the milk is the only definite plan for improvement based upon knowledge.

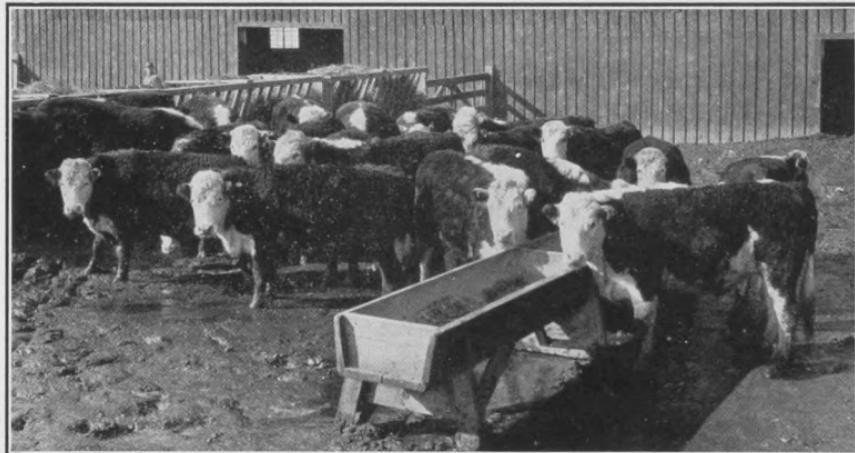
**Select Your
Heifer Calves**

The heifer calves you keep to replenish your herd, should, in every case, be from your best producing cows. Flow of milk and richness in butter fat are two marked hereditary qualities in cattle. There is no quality that you can breed into your cows as quickly as high production and richness in butter fat.

Heifer calves, selected for retaining in the herd, should be fed and cared for in such a way as to develop their milking qualities. They should be fed for growth and the development of a good big frame, but fattening them should be carefully avoided. They should be raised under what the Scotsman so expressively calls "Natural conditions." They should be bred as soon as they have growth enough to make into fair-sized cows, and should then be fed liberally before freshening, and milked for nearly twelve months during their first period of production. This will at least assist them in forming the habit of being long-distance cows.

Beef Cattle

Beef cattle can be improved in the same way by the selection of sires of the thick, smooth, early maturing sort. Breeding for uniformity will make the



Western steers fed on the Dominion Experimental Farm, Ottawa.



Judging Car Lots of Bacon Hogs, Royal Winter Fair, 1930.

most marked improvement in a herd. If a farmer secures a bull that sires calves of the right type, and all pretty much alike, he has found an animal worth keeping. This, after all, is the most important feature in breeding.

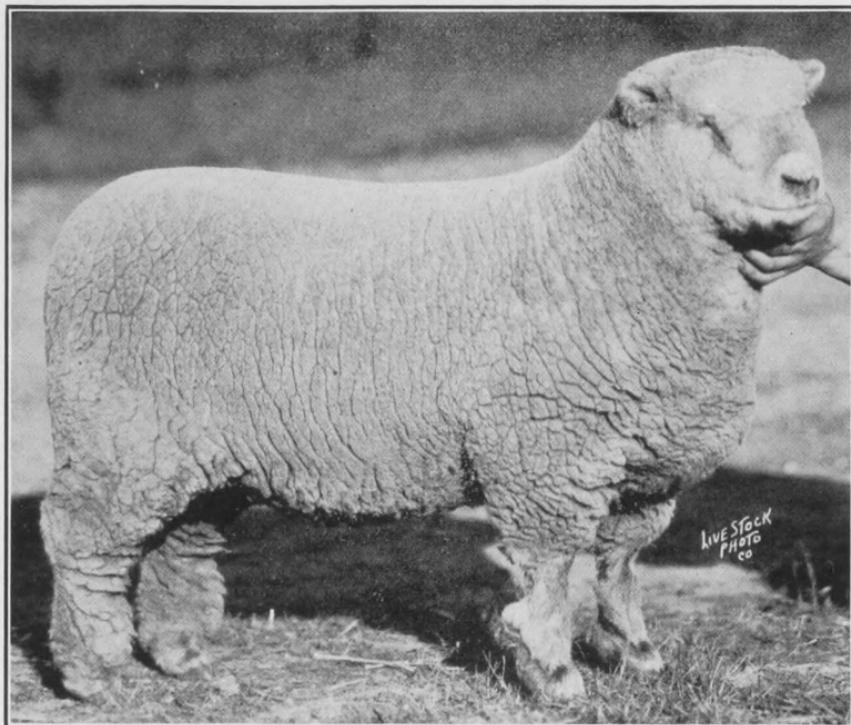
Cross breeding in cattle will usually produce good market animals, but where a farmer is building up a permanent grade herd of beef cattle, he will be well advised to stick to one breed, that of his choice, and endeavor to go on improving his herd in a useful and profitable way.

Market Hogs In breeding market hogs, the well-defined bacon type, so much in demand today, should be the object in view. I recently visited the farm of Thomas McKercher, of Olds, Alberta, and found that by selection of his brood sows from his best litters, and the use of the best bacon type sires, he produced 465 market hogs last year, of which 70 per cent. sold as selects; and his final shipment for the year of 22 hogs graded 100 per cent. selects.

There is no livestock in which such rapid improvement can be made as in hogs. They mature in six months, consequently you do not have to wait long to realize the full value of the improvement.

It is well to keep in mind also that the size of litters is a hereditary feature in pigs. For this reason all sows, for breeding purposes, should be selected from large litters and the same policy should be pursued in the purchase of a sire. Mr. McKercher had an average of nine pigs raised to maturity from some fifty sows last year. As there is always some mortality among young pigs, this is a good record.

Mr. R. A. Wright, of Drinkwater, Saskatchewan, has been attempting a record of a ten-pig average from thirty pure-bred Yorkshire sows, and has all but accomplished his object. Mr. McKercher has been using the same breed of hogs, but his sows are not registered stock.



*Champion Southdown Ewe, 1930 Royal Winter Fair, Toronto.
Owned by Robert McEwen & Sons, London, Ontario.*

Market Lambs In Scotland the policy of breeding cross-bred lambs for market has been followed for years with good results. In some instances the cross-bred ewe lambs have been used for breeding, but as a rule they go to the market. Cheviot ewes and a Border Leicester ram has been a favorite cross.

In Canada the men who are breeding sheep on the range keep merino grade ewes and use a ram of a different breed to cross with them. In farm flocks it is a fairly good rule to stay with one breed. If you begin with grade ewes and use a pure-bred ram, you can see a marked improvement in

two or three generations, and by using rams of one breed you produce a uniformity in your flock that will be worth money.

In breeding cattle, horses, sheep, hogs, or poultry, there is a great deal to be gained by having uniformity in your studs, herds, and flocks. There is a best type in every breed and all your efforts should be centered upon achieving that type.

Grades For Beginners There are some advantages for beginners in breeding grade rather than pure-bred livestock.

If an animal dies the loss is not so great, and you may, in the beginning, be the kind of caretaker who is not able to reduce mortality to a minimum. High-class livestock suffer more from lack of attention than do ordinary animals. If you pay high prices for good animals, their value will quickly depreciate if you do not keep them fit. Ordinary beasts will not suffer so much either in appearance or value.

If you have high-class females you must buy an expensive top-quality sire to improve them. A sire that will cost much less money, and be also quite a good animal, will work a marked improvement in your grade herd. When you have learned how to breed up the best grade farm animals in your neighborhood, you are then ready for a few pure-bred females, and by that time you will also understand the kind to buy.



Line-up of Clydesdale Geldings at Royal Winter Fair, Toronto, 1930

*Chapter X***PURE-BRED LIVESTOCK**

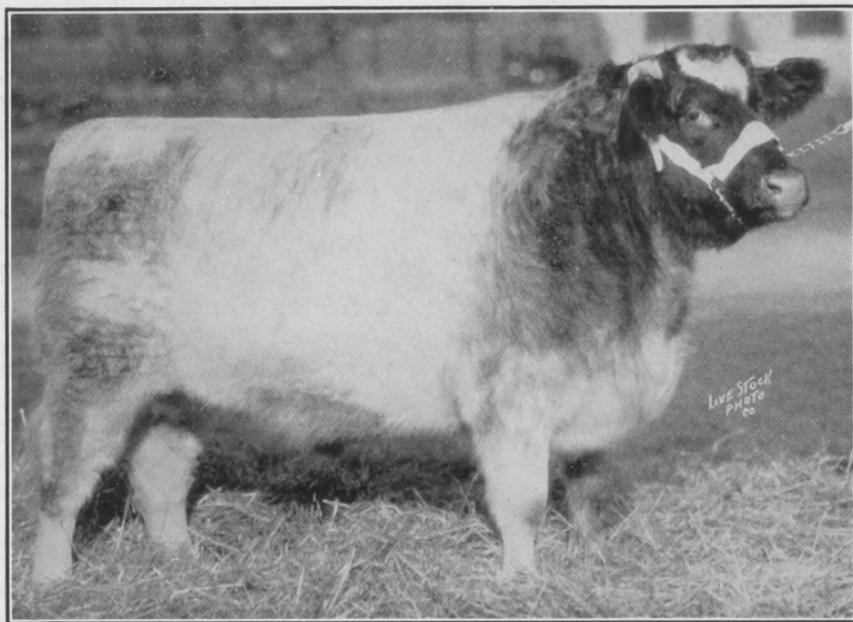
THE breeding and care of pure-bred livestock is a form of farming that requires special adaptation on the part of the person engaging in it. The breeding of high-class livestock is a business only learned by years of experience and constant application. To succeed in such a business, a man must be attracted to it by a fondness for farm animals, and he must possess the patience and industry that is usually required in any difficult or complex business. It is a very fascinating occupation, however, and well worth the effort if you appreciate its possibilities.

A Careful Commencement When a farmer decides to breed pure-bred livestock, he should start on a very modest scale, making his purchases carefully and judiciously, and always keeping in mind that a few good animals are better than twice the number of inferior beasts.

A definite policy of culling your farm animals should be adopted and consistently followed up. Animals that are not good doers, or regular and consistent breeders, are often found on many farms, and they should not be retained, but disposed of as promptly as possible, and should disappear by way of the stock yards. Nothing is ever gained by selling an unprofitable animal to another breeder.

Pure-Bred Cattle The best method of beginners in the pure-bred business is by the purchase of a good pure-bred sire to improve your grade herd. Having decided upon the breed of cattle that suits your purpose, and secured some useful grade cows, it will pay to get a good bull, one with some worthwhile lines of breeding behind him, as well as being a good individual.

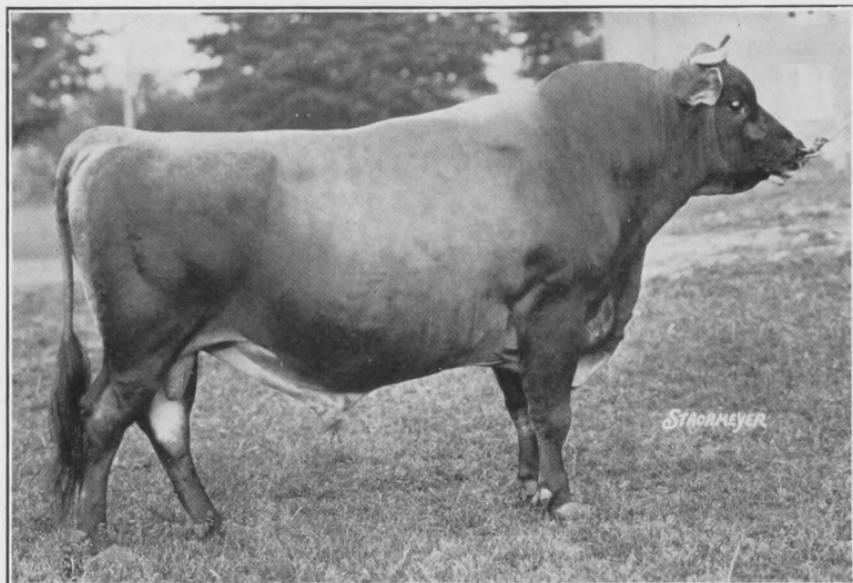
As you proceed in your cattle-raising operations, it will be profitable to sell three or four head in order to purchase a better bull. It is always a good plan, when you have secured an impressive sire, to buy two or three pure-bred cows to mate with him if you can at all afford the investment. In this way you have a pretty fair chance of selling a young bull or two for prices that will make it easier to purchase another and perhaps a better herd leader.



Tam O'Glenburn, Grand Champion Shorthorn Steer, 1930 Royal Winter Fair, Toronto, and Reserve Grand Champion at the Chicago International. Bred and owned by Colonel F. H. Deacon, Unionville, Ontario.

When your calf crop begins to develop, so you can judge their possibilities, and you find they are not an improvement on their mothers, change your sire, as he is not impressive enough for your herd.

This does not mean that you must go out and buy an extremely high-priced bull. Frequently good breeding bulls,



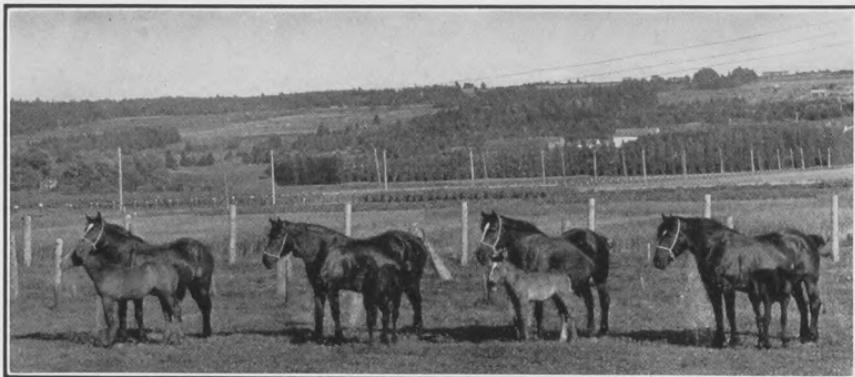
*La Sente's Oxford Sultan (Imp.), Jersey herd sire, for Wm. Douglas Thomson,
Brooklin, Ontario.*

and often tried sires, can be purchased at reasonable prices. In times when prices are not unduly inflated, a farmer, who is breeding in a small way, should always be willing to pay for a herd bull a price about equal to the value of two or three of the bull calves he has been selling. This should work improvement in his herd, but is a suggestion rather than a rule. It often pays to buy at a much higher price, if you see the animal that looks like filling your bill.

Care of Pure-Breds The breeding of pure-bred cattle should only be undertaken by those who are ready and willing to give them extra care. Someone has said that the feed is half the breed. Cattle will not grow and develop if they are not well fed and well cared for. Neglected pure-bred cattle will soon degenerate into pure-bred scrubs.

When a buyer comes to your place to purchase a pure-bred bull or heifer, he expects to get something better than a common animal. If your beasts are not in good fit they will not look valuable enough for him to buy at anything but a very low price.

A good beast will always pay for its feed, and a good animal half starved is almost a total loss. If you are not prepared to give your pure-bred calves extra attention, good feed to grow them out, and an occasional washing to keep them clean and attractive, you should not try to breed pure-bred cattle. The extra profit they will pay you, above that from grades, is mostly made by the care and attention you give them. When you finally develop into a breeder of that class of pure-bred cattle which are fit to take their places in the show ring, and to command high prices at sales, you will have learned not only the value of fitting, but many lessons in how to do it well.



Breeding good farm power on the Dominion Experimental Farm at Ste. Anne de la Pocatiere, Quebec.

Attractiveness In Pure-Breds

It is a good plan to keep in mind the fact that to please the eye of your purchaser is to strongly promote a sale. Straight lines, beauty of form, attractive breed type, straight, well-placed legs, good heads, and quality throughout are most desirable qualities. High tail heads, coarse horns, sloping quarters,

and shallow bodies are undesirable in any breed. "Field and Farmyard" gives brief descriptions of all the popular breeds and their characteristics.

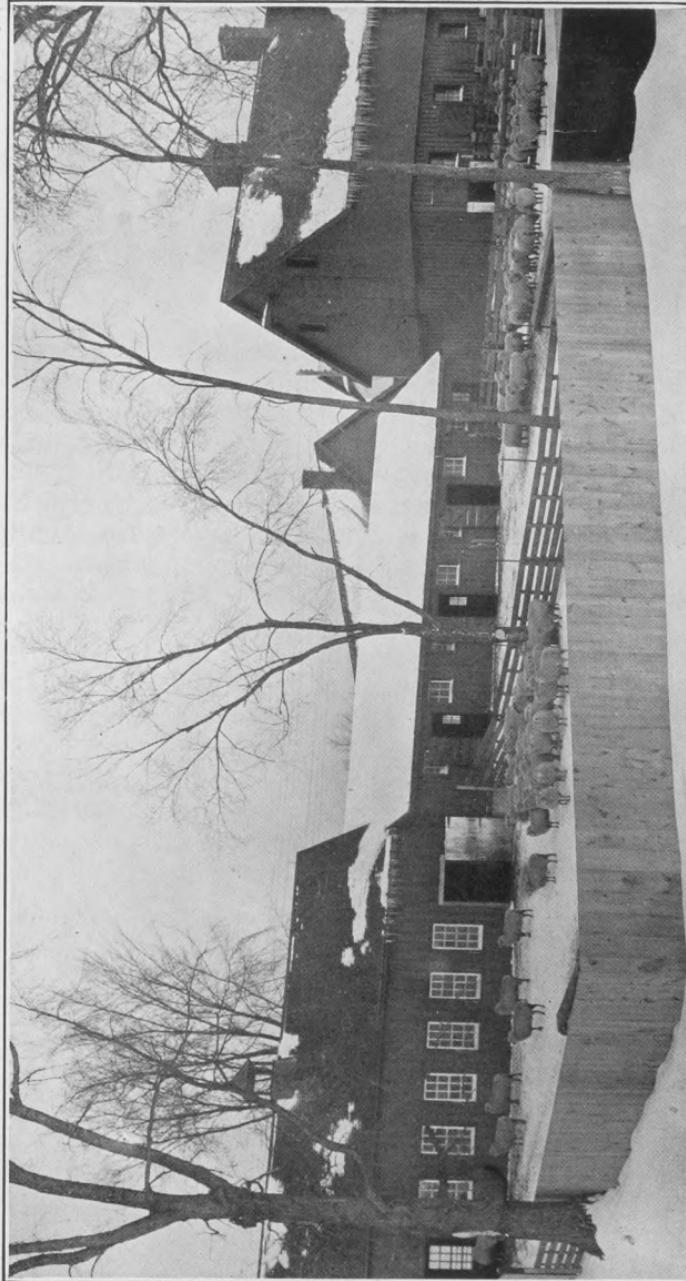
Breed for attractiveness and general goodness, and feed to bring out these qualities, and accentuate their appeal to the buyer. He generally wants something better than he already has, and if you do this you will find customers for your calves.

Breeding Up Pure-Breds There have been a number of instances where farmers have begun a pure-bred herd with a few quite ordinary cows, and by a judicious selection of sires have built up a herd of outstanding merit in a period of ten or twelve years. One such example in Ontario was James Brown, who farmed near Norval Station. He had a few plain-bred Shorthorn cows of fairly large frames and rather good udders. His purpose was to breed up a herd of good milking Shorthorns. He purchased all his bulls near home and evidently did not attempt to secure sires with milk records behind them. He was working long before there were any records of performance in connection with the Shorthorn breed in Canada, so he would have had to go out of the country for them.

In the purchasing of his bulls he was guided entirely by his own judgment of the individual, and he had a rather clear idea of what he wanted. He evidently possessed that cattle sense with which a great many successful stock men are endowed.



Walter Rutter's farm buildings, Rosebank, Manitoba.

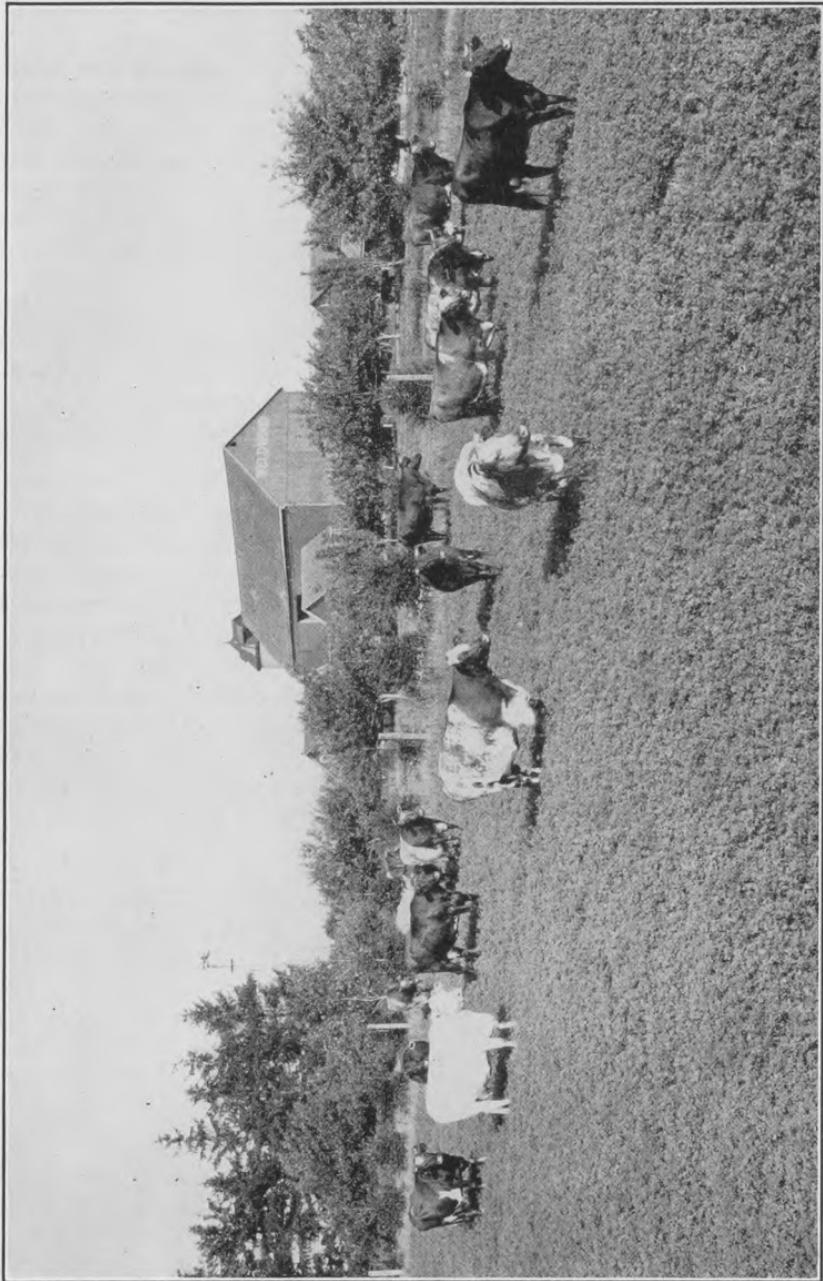


Wintering sheep at the Central Experimental Farm, Ottawa, Ontario.

Selecting His Bulls He began breeding Shorthorns back in the nineties. One of the first bulls to produce good milking cows for him was Strathallan Lad —178110, and a number of his daughters were the foundation cows for record milkers. He followed him with a bull, McKay 4th —37859— and this animal continued to improve the herd. Only two of his daughters that I know of had their records kept. One was Lady McKay 2nd —69110—, with a record of 10,491 pounds of milk in 365 days, and the other was Rose of Kentucky 36th —69972—, with a record of 7,079 pounds of milk in 315 days. A number of others were good cows, but as Mr. Brown did not weigh his milk, it was after they passed out of his hands that these records were made.

It was in 1908 that Mr. Brown made his best selection of a bull in Butterfly King (Imp.) —55004—, imported by Robert Miller, of Stouffville, Ontario. This was a Scotch-bred bull of approved Cruickshank breeding, but he was out of a cow with a good udder, and she was a splendid milker. This bull was a "quality animal" all the way through. His hide was soft as a glove, his hair fine and silky, and he had nice flat, well-shaped horns. He was deep of rib, straight in his lines, and short in his legs. Even in very moderate flesh he was good to look upon as a specimen of the Shorthorn breed.

Great Milking Shorthorn Cows In 1912 we came east to Ontario, from Alberta, to find a few Shorthorn cows that would milk; the idea being to establish a dual-purpose herd. After making some enquiry, we were directed to James Brown's farm, and this great group of cows were worth travelling a long distance to see. Mr. Brown was negotiating to sell his farm as a site for a Boys' School, and we managed to purchase some dozen females from him. Everywhere we saw the results of Butterfly King's breeding, and we located this great bull at the farm of T. C. McEvoy, near Claremont, and purchased him also.



Dual-purpose Shorthorn herd at Weldwood Farm, London, Ontario. Owned by John Weld.

Records of performance were then being established in Canada for Shorthorns, and Butterfly King was the first Shorthorn bull to qualify for this honor, which required a bull to have four daughters in the record of performance, all from different dams. Eight of the daughters of this bull shipped west by us qualified. The records of the cows bred by James Brown that qualified, of which I have been able to learn, were as follows:

Cow	Milk	Fat %	Period
Lady McKay 4th —69110— (Sire—McKay 4th —37859—)	10,491 lbs.	3.5	365 days
Rose of Kentucky 36th —69972— (Sire—McKay 4th —37859—)	7,079 lbs.	3.43	315 days
Kilblean Beauty 3rd —85198— (Sire—Butterfly King (Imp.)—55004—)	9,998 lbs.	4.07	353 days
Lady McKay 3rd —85667— (Sire—Butterfly King (Imp.)—55004—)	8,284 lbs.	3.96	355 days
Lady McDonal 3rd —101013— (Sire—Butterfly King (Imp.)—55004—)	7,048 lbs.	4.7	335 days
Butterfly Lady McKay —101014—..... (Sire—Butterfly King (Imp.)—55004—)	6,824 lbs.	4.73	325 days
Butterfly's Lady McDonal —101015— (Sire—Butterfly King (Imp.)—55004—)	5,549 lbs.	4.17	365 days
Kilblean Rose —101017— (Sire—Butterfly King (Imp.)—55004—)	7,019 lbs.	4.21	338 days
Butterfly's Lady McKay —101018— (Sire—Butterfly King (Imp.)—55004—)	7,296 lbs.	4.64	365 days
Butterfly's Kilblean Beauty (Sire—Butterfly King (Imp.)—55004—)	4,576 lbs.	4.3	249 days
Braemar Belle —101019— (Sire—Braemar Champion (Imp.)—73730—)	6,605 lbs.	4.4	260 days
Kilblean Beauty 9th —115698— (Sire—Braemar King —91190—)	8,223 lbs.	4.28	319 days

This list of remarkable cows were all bred by a plain, plodding farmer, who quietly worked to improve his herd and who began in a very small way with pure-bred cows. These records were among the first made by Shorthorns in Canada, and with a few years of development could have

been greatly exceeded. It should be kept in mind that most of these cattle were bred over twenty years ago.

Butterfly King Bred On Not only was Butterfly King the first bull in the record of performance, but he and three of his sons were four of the first eight bulls so recorded. Mr. Brown used another imported Scotch bull to follow Butterfly King, namely, Braemar Champion (Imp.) —73730—. Records of performance were not established until Mr. Brown had sold most of his cattle, yet we now find that not only this list of cows, bred by him, made records, but both Butterfly King and Braemar Champion are in the Shorthorn record of performance, and also three sons of the former and one of the latter, and three out of the



Darlington Gem, three times Grand Champion Dual-purpose Shorthorn Cow at the Canadian National Exhibition, Toronto. This cow has a record of 10,567 lbs. of milk with 381 lbs. of fat in one year. Owned by D. Z. Gibson & Son, Caledonia, Ont.

four were bred by Mr. Brown. These bulls in the record are:

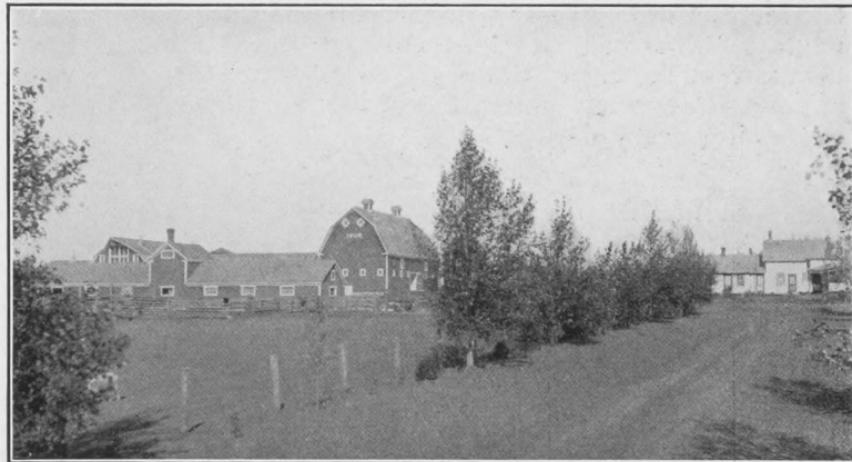
Butterfly King (Imp.) —55004—, used by James Brown.
 Butterfly King 19th —73825—, bred by James Brown.
 Butterfly King 21st —76303—, bred by James Brown.
 King Edward —91030—, bred by T. C. McEvoy.
 Braemar Champion (Imp.) —73730—,
 used by James Brown.

Braemar King —91190—, bred by James Brown.

This record of one man's achievement under moderate farm conditions should be an incentive to every breeder of cattle to strive to improve his herd. Mr. Brown sold many of these cattle at prices that paid him good profits.

**Breeding
Pure-Bred Pigs**

In Canada at the present time only one type of hog is wanted, and so we can concentrate on the bacon type. This type is not confined exclusively to any one breed, but some breeds lend themselves better than others to the production of the class of bacon now in demand.



Farm buildings of Angus McDonell, St. Albert, Alberta.

Most farmers breed hogs for market, and so are not particular about registration, though a pure-bred boar should always be used, as he is more certain to have his type fixed by several generations of careful breeding and, consequently, is much more likely to give you more uniform results than a grade.

Pigs for breeding, as pointed out in Chapter IX, should always be selected from large litters of good uniform type. If this method is followed, one may be fairly certain in having large litters of good bacon type hogs.

Farmers who are near a stock yard may be able to purchase store pigs for feeding and finishing that will pay him some profit, but ordinarily it is better to breed your own pigs for feeding. In this way you can get hogs of a good quality and you can arrange the arrival of your litters to be fed off in six months and be marketed at a time when pork is likely to command the best prices.

There are two periods in the year when hogs have usually had a firm market and producers should aim to be ready for that market, and to be ready with hogs that have been fed so as to weigh approximately 200 pounds when six months old. Feeding hogs until they are eight or nine months old in order to reach market weights means losing profits that belong to the pig feeder. A hog's time is worth a good deal when you are making him into pork. Keep him going every day.

Times to Market The Ontario market for hogs is generally strong in August and September, and again in March and April. This is not an inviolate rule, and will vary to some extent, but to plan for delivery about these times has been a fairly good rule of recent years.

To meet the August and September market it will be necessary to have pigs farrowed in February and March. This is early and they require more attention, but it is usually only the things that require attention that pay dividends.

The March and April markets can be met by pigs farrowed in September and October. This is a good time for young pigs to arrive for winter feeding. Late litters in the Spring mean also late litters in the Autumn, if you are breeding twice a year, so that the man who drops back in this business is liable to find himself just about a jump behind the top prices all the time.

Nothing is more fatal to farming than being behind with any farm operation. Keeping up with the procession (not with the Jones') is highly important to every man making a living on the land.

Keep Breeding Consistently Hogs are produced quickly, and farmers frequently fancy they can get into them when the price is high and out when it drops. This is not good policy. Men who try this lose when going out, as it is only when the price has dropped that they quit, and they fail to get in again in time to make the profit on the rise in values.



Ploughing on the Dominion Experimental Farm, Ottawa

It may pay to breed less extensively when prices begin going down, but by no means should a farmer go completely out. He should keep up a fair stock, so when values begin to stiffen again he has sows enough on hand to get in strong on the upgrade in prices. As pork prices rise the demand for breeding stock advances very rapidly and the farmer who stayed in hogs is ready to reap a very considerable harvest in marketing breeding sows.

This is a feature of the business not to be overlooked, and by breeding pure-bred hogs of approved bacon type, a farmer always has a few gilts on hand that will sell well for breeding purposes. This is one of the advantages of pure-bred breeding.

In breeding pigs, as in every other phase of agriculture, the successful man is the one who follows up lines that make for good farming practice, and yield good average profits, and who keeps at it consistently.

Breeding Sheep Sheep play a useful part in farm economy, but be sure to have your farm fenced to hold them before you begin stocking up. As weed destroyers they are a distinct aid to clean farming, and will help to pay their keep by the destruction of these farm enemies.

Early lambs generally find a high market. If you can produce hothouse lambs for the Easter trade you will get a premium for them. This is not always possible, but lambs in February and March are quite easily taken care of. There is time to give them attention at that season. They get a good growth in the pens and when the grass comes the lambs are ready to feed on it, and the ewes flush up in their milk, which gives the lamb a double chance to grow and put on flesh. Lambs in this way are ready for a June or July market, bring a good price, and the ewes will have a chance to get in good flesh before the breeding season in the Fall.

Securing the best market is a very important feature of farming, and times and seasons must be reckoned with when you are preparing any product for sale. Sheep that produce

good mutton and fairly good wool are the kind to breed in Canada. You must select the breed that pleases you, and by all means get good individuals.

If you have a pure-bred flock there are always a few sales to be made of breeding stock at prices well advanced over the mutton market. Do not keep too many ram lambs, register only the best, and be sure to identify your lambs early, so as not to be guessing at their parentage later on.

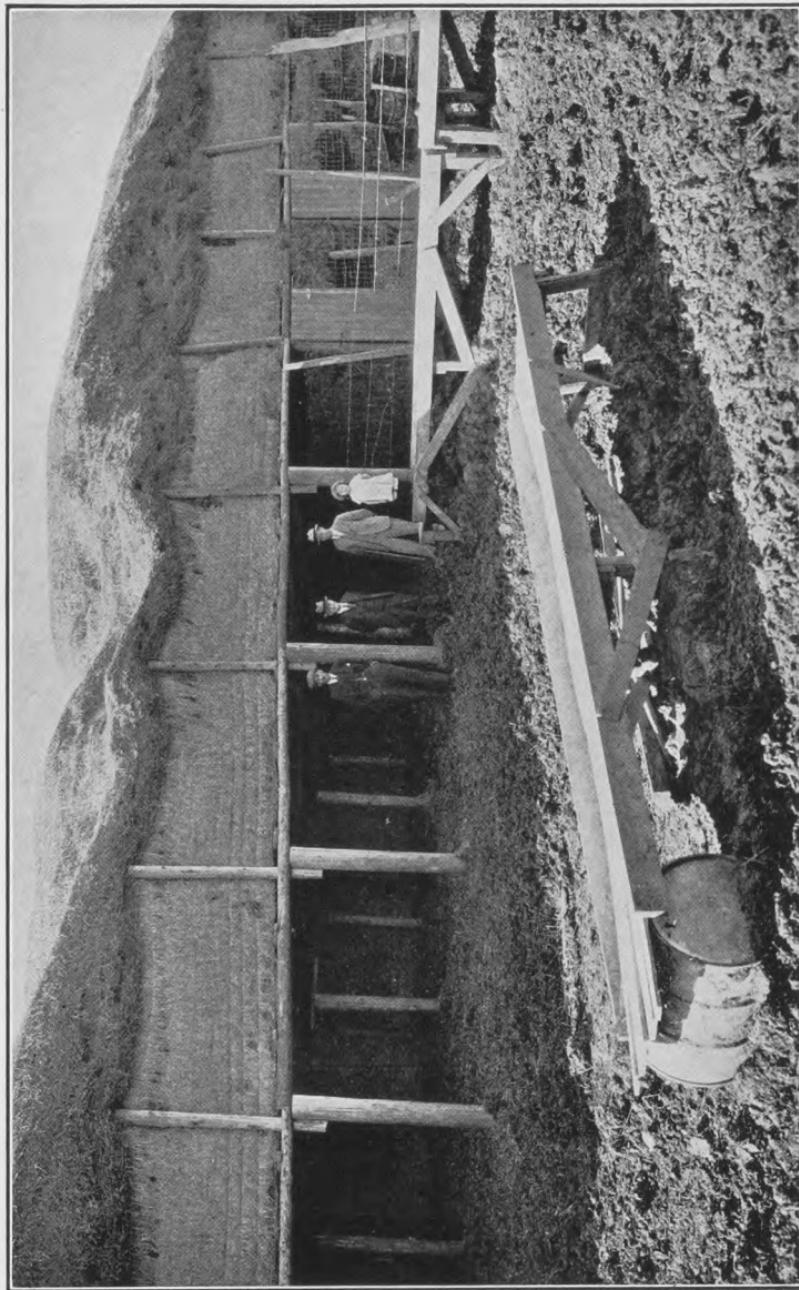


Poultry house of Thos. Hampson, Birch Hills, Saskatchewan.

Pure-Bred Poultry In poultry, as we remarked in "Field and Farmyard," "the strain is the thing." Some breed may take your fancy, and it is the one to use. Heavy laying strains have been developed in almost all the breeds and it will pay you to secure either egg or baby chicks from such a strain. If you only get a few such birds to begin with, you can easily multiply them.

For farm flocks, the American or English breeds are preferable to the Asiatic breeds of poultry, as farmers want table birds as well as eggs. Rocks, Wyandottes, Orpingtons, Sussex or Rhode Island Red are good breeds for farm purposes.

The poultry on the farm can be made a very considerable asset, and should not be neglected. Turkeys, geese and ducks are also profitable, and they greatly improve the table fare of the farmer and his family, which is something that should by no means be overlooked.



A straw shed for feeding baby beef in Southern Alberta. John Wilson, Superintendent of Feeding Experiment; S. G. Carlyle, Alberta Live Stock Commissioner, and M. L. Freng, District Agricultural Representative at Lethbridge, standing under the shed.

Chapter XI

FEEDING BABY BEEF

THE feeding of range calves for baby beef was begun upon a considerable scale last year in Southern Alberta. The work was carried on under the supervision of John Wilson, of Innisfail, Alberta. Mr. Wilson has been a successful feeder of cattle during his twenty-five years' residence in Canada, and was a buyer of butcher cattle in Scotland before coming to this country. He is exceedingly well qualified for the work and under his direction it was successfully carried out last year, and is now well under way for the season of 1930-31.

We have received an account of this work from Mr. Wilson and believe it will be of interest to farmers both West and East. The continued demand for lighter beef carcasses must result in the feeding of younger cattle, consequently, calf feeding is an important present-day farm problem.

Origin of Movement The plan upon which some two thousand calves and short yearlings were fed last year, in the Lethbridge-Raymond district of Alberta, was established through the organization of the Red Label Beef Breeders' and Feeders' Association. The prime movers in the work of organization were D. G. McKenzie, Manager in Lethbridge of the Farmers' Co-operative, and George Ross and W. H. McIntyre, well-known ranchers in Southern Alberta.

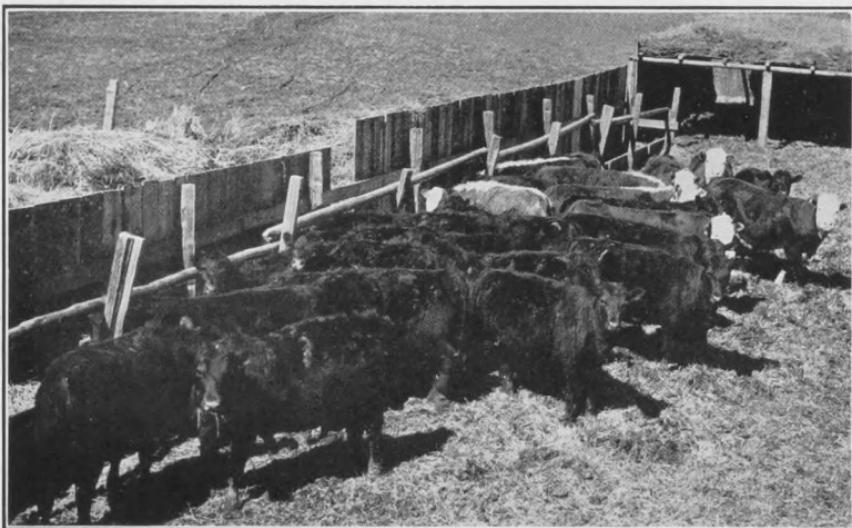
The purpose was to enable the farmer to purchase calves for feeding purposes at a price based upon their value when finished for beef, and to enable the rancher to dispose of these calves at the best possible price under which they could be profitably fed, and thus ensure a continuous market for them year after year.

**Cattle Feeding
Speculative**

Buying feeder cattle in the Fall has always been a speculation with the farmer. If the price of beef is well maintained in the Spring, he may make a reasonable profit, and a fair sale of his feed. On the other hand, if the price of beef declines sharply as the time for marketing approaches, the farmer may lose the value of the crop which he has fed, and in addition may have a further loss of time and money.

The result of such a situation has been to deter farmers from feeding cattle after a year of declining prices, and the ranchers then find it difficult to sell feeders at fair prices.

The ultimate value of beef cattle is what they will bring at the abattoir. If the price of feeder cattle is based upon this value it will be fair to all concerned. This is the basis of the plan in Southern Alberta.



Heifer calves fed on the farm of Bliss Roberts, of Raymond, Alberta. Weighed in at an average of 400 lbs. on December 2nd, 1929, and weighed out on May 15th at an average of 777 lbs. Sold for 11½c per lb.

**The Terms of
Agreement**

The agreement made between the rancher who breeds the calves, and the farmer who feeds them, is, briefly, that the rancher shall supply the farmer with calves to feed, upon which no cash payment is made. The farmer agrees to feed these calves under certain specified conditions as prescribed by the Field Superintendent, who is directing the feeding operations. All calves are weighed into the farmer's yard and weighed out again when sold. When the calves are marketed the rancher is paid on the weight of the calves as delivered by him to the feeder, at the rate of $1\frac{1}{2}$ c per pound less than the selling price when finished. The farmer, therefore, gets for feeding $1\frac{1}{2}$ c per pound, on the weight of the calves when he secured them, and the full value, at the selling price, of their increase in weight.

If a calf weighs in at 400 pounds, and when finished weighs out at 750 pounds, selling for $10\frac{1}{2}$ c per pound, the rancher would be paid for his 400-pound calf at the rate of $10\frac{1}{2}$ c less $1\frac{1}{2}$ c, or 9c per pound, which would be \$36.00. The farmer who fed the calf would get $1\frac{1}{2}$ c per pound on 400 pounds, which would amount to \$6.00 and $10\frac{1}{2}$ c per pound on the gain of 350 pounds, which would amount to \$36.75, which, added to the \$6.00, makes \$42.75 for feeding the calf. An insurance fund of \$1.00 per head is put up by the feeders to cover any losses by death, as the risk is theirs while feeding. Any surplus in this fund is returned *pro rata* to the farmers when the cattle are all sold.

Ranchers and farmers in both Canada and the United States have taken a great deal of interest in this plan of feeding. For this reason we are appending the full text of the agreement. In the case of these contracts Mr. Wilson is the "Association Field Superintendent."

Full Text of the Agreement

AGREEMENT

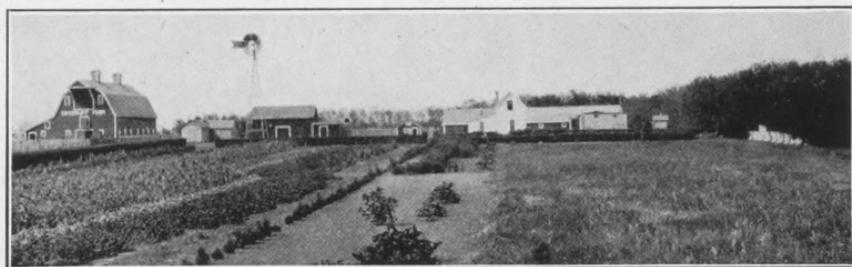
Memorandum of Agreement made this — day of 19 .
BETWEEN

....., Member of Red Label
Beef Breeders Association,
hereinafter called Beef Breeders
of the First Part,
and
..... Red Label Beef Feeder
Section of the Southern Alberta
Co-operative Association,
hereinafter called the feeder
of the Second Part.

THIS AGREEMENT WITNESSETH:

That the Feeder is a member of a Co-operative Association of Producers helping to carry out the work of finishing for market livestock delivered to him by members of the Red Label Beef Breeders Association on the terms set out hereinafter.

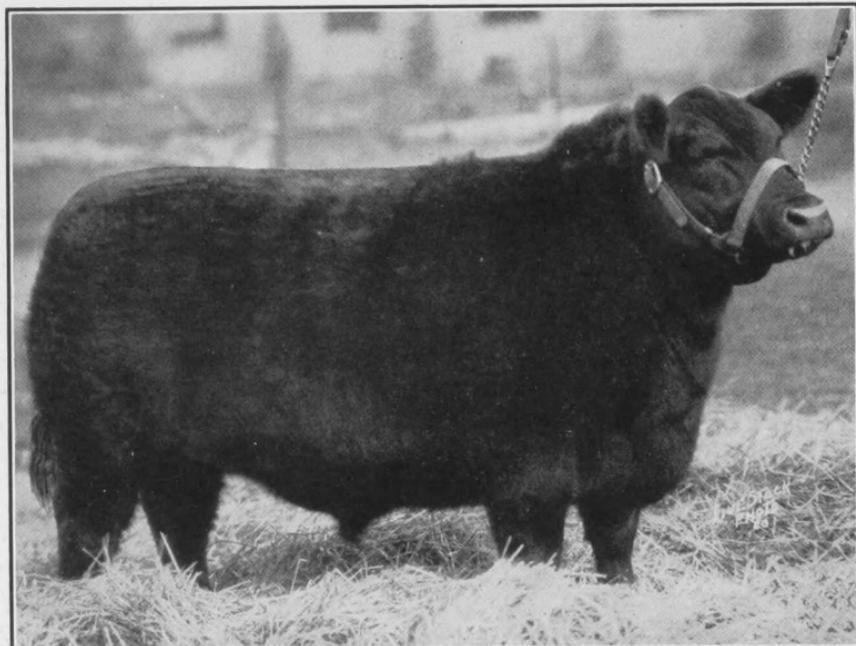
- (1) The Feeder expressly warrants he is in a position to receive livestock on his farm or feed lot, having provided feed, water, tank heater, and shelter as prescribed for the finishing of livestock by the Association Field Superintendent.



A. B. Chambers' farm buildings, Laura, Saskatchewan

- (2) That the Feeder will feed to livestock feed in such quantities and qualities as prescribed by the Association Field Superintendent.
- (3) The Breeder, being satisfied that this Agreement will be adhered to by the Feeder, agrees to supply to the Farm or Feed Lot of the Feeder at no set value. And guarantees (subject to Clause 6) on the return of the said Beef, after a reasonable feeding period, a profit to the Feeder of $1\frac{1}{2}$ c per pound live weight on weight of beef delivered, plus market price for all increased weight during the feeding period, based upon live weight of the cattle at shipping point, and subject to an overnight or 3% shrink, provided that in the event of a greater shrinkage occasioned by selling on the open market or otherwise, such shrink to be equally borne by the Breeder and Feeder.
- (4) The Feeder agrees that all livestock furnished him by the Breeders Association will be marketed in accordance with Clause "7" of this Agreement, and agrees to deliver for market, all or part of his herd at such time or place as this Marketing Agent may demand.
- (5) The Feeder agrees he has no claim on the livestock supplied other than his interest in the feeding of same, as set forth in this Contract.
- (5a) He further agrees to subscribe to Insurance against loss of livestock, the sum of \$1.00 per head, to be held in trust by his Marketing Agent, who will disburse such funds in the event of loss to the Breeders suffering death losses in such proportion as is justified by their total claim provided that the basis of settlement shall be on the initial average weight and average market selling price, less $1\frac{1}{2}$ c spread. If there shall be any surplus, it shall be disbursed *pro rata* among the subscribers should losses exceed the amount paid in by the Feeders, such Feeder under this Contract will be equally liable for the amount until all losses

are paid for. The insurance does not cover calves carried over for summer feeding. Castration losses to be borne by the Breeder, or owner. Losses must be reported by phone within forty-eight (48) hours after the death, to the offices of the Marketing Agent.



*Northland Bard, Grand Champion Aberdeen-Angus Steer, and Reserve Grand Champion of all breeds, 1930 Royal Winter Fair, Toronto.
Owned by R. M. Smith, Brandon, Manitoba.*

- (6) The Feeder agrees to use his best efforts to fatten and finish said livestock, but shall only be entitled to the $1\frac{1}{2}c$ profit on all finished livestock marketed at the close of the feeding period through the Marketing Agent. However, in the event of wilful neglect, or shortage of feed, or any other matter, a Committee of Arbitration consisting of a representative of the Breeders, a representative of the Feeders, and a third

party selected by these two, shall have power to investigate and to establish a fair basis of settlement between the Breeder and Feeder by return of cattle to the owner or otherwise.



Reliable power for the pioneer.

Marketing:

- (7) The Beef Breeder and Beef Feeder must be considered partners in the feeding of livestock, and both agree that the selling of said livestock be placed exclusively in the hands of the Feeder's Marketing Agent, the Southern Alberta Co-operative Association, Limited.
 - (a) Before any sale is contemplated all feed lots will be inspected by the Association Field Inspector, and Co-operative Sales Manager, for the purpose of ascertaining whether a minimum carload of Red Label Beef is available.
 - (b) In the event of a load of cattle being ready, the Marketing Agent will notify the Feeder of the number of head, specifying the day and place when and where the cattle will be delivered. The said Feeder under this Contract agrees on receipt of

the above notice to deliver the said cattle according to the notice given by the Marketing Agent.

Cost:

The Southern Alberta Co-operative Association agrees to market at a minimum cost not to exceed .08c per hundred-weight, liveweight on f.o.b. sales. This charge includes selling, sorting, weighing, where Co-operative scales are available, assembling, loading, collecting, and pro-rating. Said handling charge shall be deducted from gross proceeds which will determine actual market value. The above charge does not include expenses of selling the cattle under contract on livestock terminal markets.

Payment of Livestock:

The Marketing Agent will disburse all funds, less costs of handling. The Beef Breeder will deliver to the Marketing Agent's Head Office, 1221 2nd Avenue S., Lethbridge, an accounting of his claim against each Feeder, which will receive first consideration when payment is made.

- (8) Other questions arising from this Contract may be referred by either party to said Arbitration Committee, whose decision shall be accepted as final. The parties agree that there are no oral or other conditions, promises, representations or inducements, in addition to or at variance to any of the terms herein set forth, and that this Agreement represents the voluntary and clear understanding of both, fully and completely.
- (9) It is further agreed that no other livestock will be allowed in the same feed lot as the cattle, specified under this Contract, are fed.
- (10) All cattle fed under this Contract will be weighed in to the Feeder as follows:
 - (a) Where the Breeder has livestock scales at his ranch, or within a reasonable distance not exceeding three (3) miles from his ranch, cattle will be weighed up on a 3% or overnight shrink.

- (b) Where cattle are shipped by rail, or driven in and weighed at the nearest scale to the place of feeding, Breeder will be entitled to feed and water cattle before weighing.

IN WITNESS WHEREOF the parties hereto have set their hands and seals on the day and date first above mentioned.

Signed, Sealed and Delivered
in the presence of

Witness.

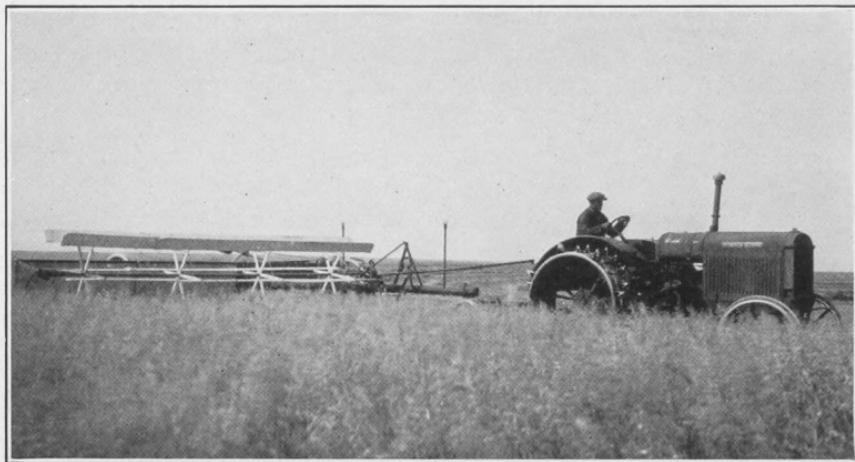
Beef Breeder

Witness.

Beef Breeder

Witness.

Marketing Agent



Cutting oats with a swather on farm of R. F. Piper, Clavet, Saskatchewan

Arrangement For Feeding Mr. Wilson, in outlining his plan for finishing calves as baby beef, says that well-bred calves are required to make satisfactory gains and reasonable profits. They should be short-legged, have deep, wide bodies, and so be of approved beef type. In fact, unless you have this class of calf a great deal of feed and effort will be wasted.

The calves should be in good condition when weaned, weighing not less than 350 pounds, and should be put into the feed lot not later than November 1st, as it takes from 180 to 200 days to finish them properly, and they should be ready for market early in May. They should be well sheltered from storms by a straw shed of some kind, and a board fence around the feed lot will give them additional protection. The feed lot should not be too large and should have mangers, in the shelter of the board fence, in which to feed the roughage.

Tables for the feeding of crushed grain should be installed in the feed lot. These should be 28" high, from 30" to 36" wide, and long enough to provide each calf with a feeding space of 18" at the side of a table. A water tank should be kept filled in the feed lot all the time, and should be equipped with a tank heater to keep the ice melted and so encourage the calves to drink a plentiful supply of water. The calves should be fed twice daily, at 8 a.m. and 4 p.m., and with unfailing regularity.

Roughage And Bedding Alfalfa or sweet clover makes the best form of roughage, but other varieties of hay are quite good. Prairie hay, if it can be secured in quantities, is excellent feed. Brome grass makes good cattle feed if not allowed to grow too coarse. Well-cured green oat bundles are very satisfactory, and if the oats are in the dough before being cut it is all the better.

A quantity of good oat straw may be fed with the hay, as it will add variety to the roughage, but do not feed oat straw alone or the results will be rather disappointing. Calves will not do well on it. As a change when feeding alfalfa or sweet clover, it is very good.

The yard and shed should be kept well bedded every day with clean, dry straw. This will encourage the calves to lie down a good deal, which will be very conducive to their fleshing, and making the best possible use of their feed. Do not neglect the bedding—it is an important factor in the feeding of the calves.



Time for another drink. Threshing on the prairies.

Meal Rations Great care should be taken when the feeding grain is begun, so as not to derange the digestion of the calves. These youngsters have been on a diet of milk and grass, two of the most easily digested foods that could be provided for them. Meal is a strong food and the change must be made gradually.

Whole oats is the best grain to begin with. A calf will take small quantities of whole oats without any injurious results, when it is very young. Begin with one pound of whole oats, per calf, twice a day, for four or five days. You may then add one half-pound of crushed oats to this ration at each feeding for eight or ten days. You might now drop the whole oats from the ration and for the third week feed two pounds of crushed oats per feed. Your calves will then be eating four pounds of crushed oats per day at the end of the third week.

In the fourth week you may safely begin to strengthen your feed by the addition of ground barley or wheat. Begin with one half-pound of barley or wheat added to each feed for about two weeks, and then double the quantity. You will now be feeding two pounds of crushed oats and one pound of ground barley or wheat at a feed, making six pounds of meal per day for each calf.

From this time on you must be guided by your judgment of how they are doing. If they do not clean up their grain ration at a feed, sweep off the tables and feed a little less until their appetites get keen again. Never overfeed calves, or allow a considerable residue of their meal to collect on the tables. It might put them off their feed. Their appetites must be kept on edge. Have a good supply of salt always available.



Farm buildings of Chas. Farr, Sedley, Saskatchewan.

Use Fresh, Sound Feed Care should be taken to avoid feeding musty hay or grain that has been damp or heated.

Stale feed of this kind is likely to spoil the appetites of your calves and gains in weight are only made through the eating of food. If the ration is sound and fresh the cattle will relish it and satisfactory results will be obtained.

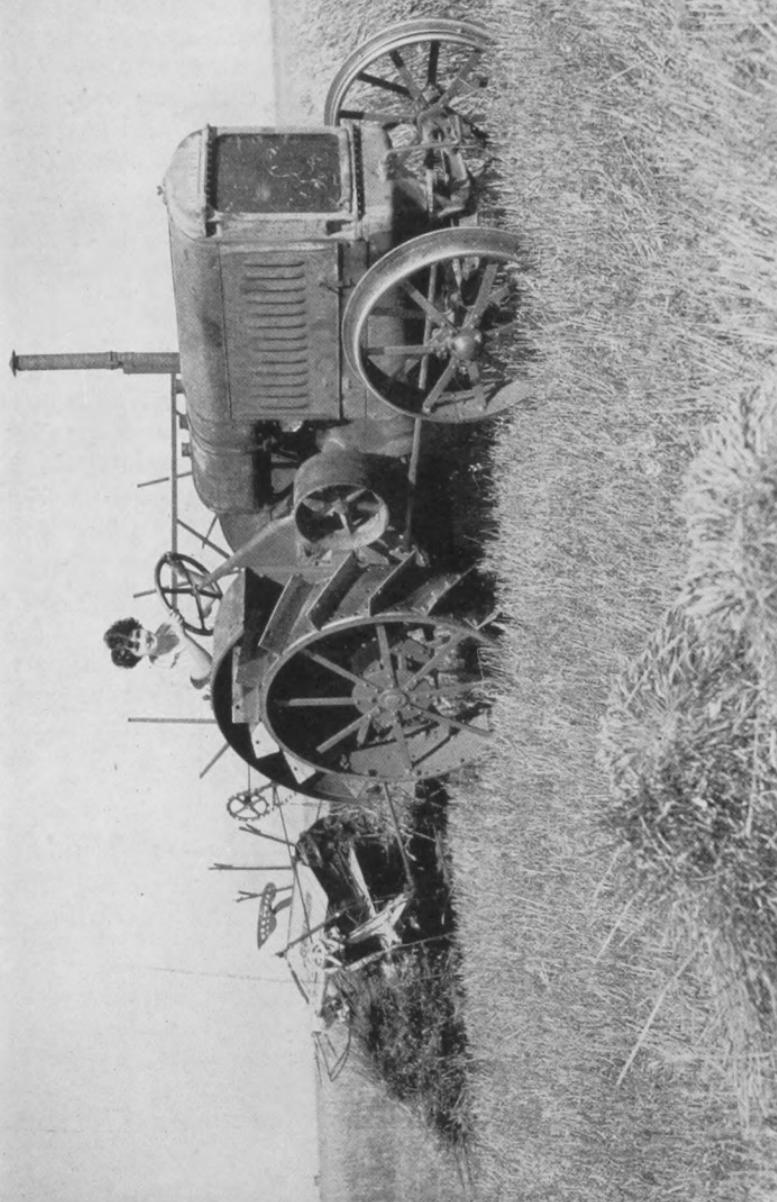
A little bran added to the grain during the first thirty days of feeding will keep the calves in good condition.

Finishing Period After the first two months, when your calves have been eating six pounds of grain per day, this amount may be gradually and carefully increased. The more good food they can assimilate, the greater profits they will pay. During the last two months their grain feed may be increased up to eight pounds per day for each animal.

When this amount of grain is fed you can cut down on the roughage, just feeding what they will clean up from their racks or mangers. The watchful feeder is always the most successful. Close attention must be paid to every animal to see that it is doing well and, if not, it may require some special care.

Gains Made Some of the top calves in last year's feeding experiment made average gains of three pounds per day, and the average gain of the whole lot, for the feeding period, was two pounds per day.

In a number of feeding experiments carried on at agricultural colleges, particularly in the United States, it has been shown that feeding calves is more profitable than feeding older cattle. Greater gains have been made with the same amount of feed and the finished product brings a higher price.



Miss Ashbough cutting wheat with a tractor-binder outfit, at Gray, Saskatchewan

Chapter XII

MIXED FARMING ON THE PRAIRIES AND IN ONTARIO

IN THESE days we are hearing a good deal about the value of mixed farming on the prairies. So much, in fact, that some people imagine this to be a new gospel that is being preached. As a matter of fact, mixed farming in the West is as old as prairie agriculture itself, and has not only been advocated since the first land was broken, but has been practised as well.

We hear about the one-crop farmer continually, and when calamity overtakes him we hear a great deal more, but all the time there is a large body of men on prairie farms who are raising livestock, keeping pigs and chickens, and milking cows. These men are raising wheat also, and some of them harvest a very considerable amount of this cereal. When it is a good price the receipts of their farms are substantially increased, and they are able to improve the comfort of their homes, build barns and fences, and make their farm conditions more livable.

Occasionally they add a new piece of land to their holdings in anticipation of the time when their sons may want to go farming on their own account. All the time, however, they are raising and marketing livestock, enriching their soil, following a good system of crop rotations, and so strengthening their farm operations to meet the emergencies that every business has to face from time to time, in the natural course of events.

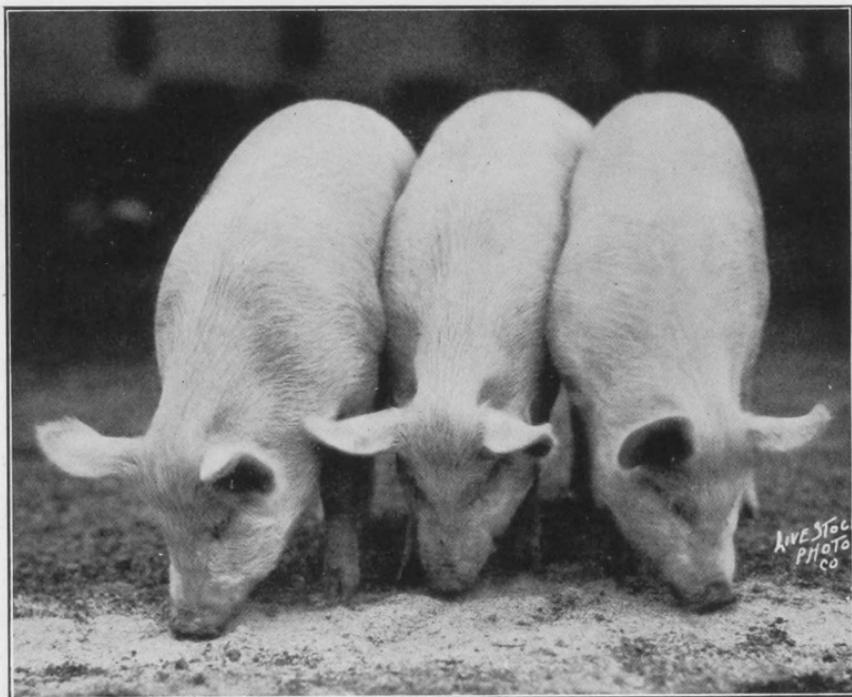
Practical Examples Almost any number of examples of such men can be given. They are farming in Western Canada and in Ontario, and have been making and saving money. In some cases I am able to give the names and locations of these men, which makes the statements all the more

authoritative. In every case the statements I shall give, however, will be from figures furnished me by prairie farmers, in their own homes, and from carefully kept accounts, which I am pleased to say many of them have.

A Successful Farming Operation

J. H. Tolton, of Oak Lake, Manitoba, began farming on the prairies a few years ago, purchasing his father's farm as a going concern.

He values his property, even in depressed times, at \$25,000. The land is Section 11-11-24 W. of 1st. He began operating with a small herd of beef cattle of fair quality, bought at reasonable prices, and pure-bred bacon-type hogs of rather superior quality.



*First Prize pen of three Barrows, Royal Winter Fair, 1930, owned by Alex McPhail
Brandon, Manitoba.*

He lives in a wheat district and has carried on wheat farming to a considerable extent. He secured some registered seed, kept the weeds under control, and sold most of his wheat for seed. A few cows are milked, but never more than three or four, so sales of surplus dairy produce are small. He crops about 400 acres of his section of land and uses the remainder for pasture and hay. About 25 acres are seeded to sweet clover, and late oats grown on the summer-fallow, which are cut green for hay. His silo is filled with fodder corn, which produces a fair yield in this part of Manitoba.

This young man has given a good deal of attention to his bacon hogs and has secured some rather nice prices for both boars and gilts. Accurate records are kept of the receipts and expenditures, and this farm is making good headway. Mr. Tolton uses a one-way disc, especially for Fall cultivation, and claims to get much better work done with it when drawn by the tractor at a high rate of speed. It is for speeding up his farm operations that the tractor is used, as horses do a large part of his work.

His stock consists, at the present time, of 30 head of pure-bred Shorthorn cattle, 20 head of feeder cattle, 5 registered Yorkshire brood sows, a boar, about a dozen horses, and a good flock of poultry.

His 1930 crop of grain yielded 3,700 bushels of wheat, 3,050 bushels of barley, and 4,400 bushels of oats, all of which he grew on 265 acres of land. He summerfallowed 135 acres. This young farmer owns a threshing machine and does some custom work with it for the neighbors.

Mr. Tolton was good enough to give me the privilege of using the figures of his farm in this publication, as nothing is so convincing, with respect to agriculture, as the actual achievements of a farmer on a piece of land. We have not complete figures for 1930, as his grain is still unsold, but the results in this unfortunate year are rather striking proof of the value of livestock to a farmer when grain prices crash.

Four Years' Record We give here the results of his operations for the last four years, from which it will be seen that he is engaged in a successful business, and one that is of vital importance to Canada's progress. What this young man and his capable, intelligent wife are doing on a western farm is open to most people who wish to live on the land. His farm operations in 1927 were as follows:

<i>Receipts</i>	<i>Expenditures</i>
3,073 Bus. wheat	\$3,676.90
1,875 Bus. barley	1,129.40
Clover seed and pota- toes	21.00
Poultry, eggs, hides	60.00
12 Cattle, pure bred.....	1,199.00
20 Hogs	619.00
Cream	138.70
Threshing receipts	620.00
Prizes at fairs	65.00
Honey	30.00
Misc. receipts	8.00
<hr/>	
	\$7,567.00
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Seed grain	\$ 143.50
Feed, oil cake	58.75
5 Cattle bought	380.00
1 Hog	30.00
1 Horse	40.00
Binder twine	85.10
Repairs to machinery, fences, buildings and blacksmith account..	254.00
Fuel and oil for tractor	285.00
Insurance	30.00
Taxes	259.00
Hired help	550.00
Registration fees	25.00
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	\$2,140.35

Receipts	\$7,567.00
Expenditures	2,140.35
Profit	\$5,426.65

This profit should then be divided as follows:

Earned 6% dividend on investment	\$1,500.00
Labor income	3,926.65
<hr/>	
Total income	\$5,426.65

The cost of boarding the hired help will be easily offset by the amount of the produce from the farm consumed by the family. A city man must keep his family out of his income.

In the year 1928 his figures showed these receipts:
1928 Results

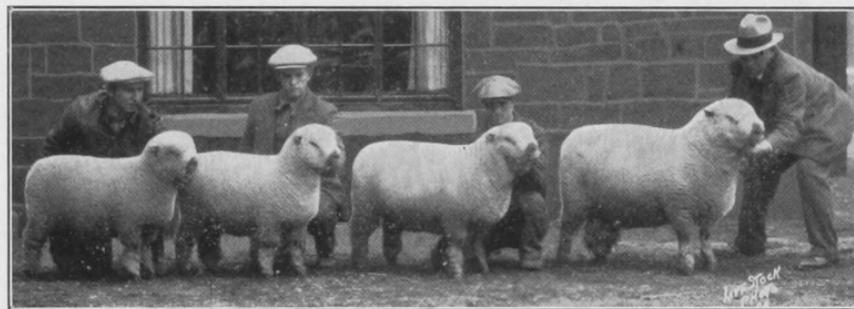
<i>Receipts</i>	<i>Expenditures</i>
Wheat, 4,530 bus. for seed \$4,011.70	Seed grain \$ 302.50
Barley, 1,920 bus. 1,442.20	Feed 40.50
7 Cattle 916.80	Bull bought 405.00
32 Hogs 724.35	Hogs 53.00
Poultry, eggs and hides 97.85	Binder Twine 105.00
Cream 132.80	Repairs and blks. 277.20
Prizes at fairs 100.00	Fuel and oil, tractor 417.65
Threshing 902.50	Insurance 30.50
Misc. receipts 22.00	Taxes 257.20
Extra grain receipts 89.70	Hired help 777.00
Honey 25.00	Registration fees 35.00
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\$8,464.90	\$2,700.55
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Receipts \$8,464.90	
Expenses 2,700.55	
<hr/>	
	\$5,764.35
<hr/>	
Profit divided:	
Earned 6% dividend on investment.....	\$1,500.00
Labor income	4,264.35
<hr/>	
Total income \$5,764.35	
<hr/>	



Farm home of E. S. Whately, Kindersley, Saskatchewan

In the year 1929 the figures for this farm were:
1929 Results

<i>Receipts</i>	<i>Expenditures</i>
Wheat	\$ 4,014.00
Barley	65.85
Cattle, 12 head	1,465.00
Hogs, 28, pure bred	911.00
Horses, 2	150.00
Poultry, eggs, etc.	44.00
Cream	139.90
Prizes at fairs	357.00
Threshing	565.00
Other grain sales	105.00
Miscellaneous	8.00
Honey	25.00
	<hr/>
	<hr/> <u>\$7,849.75</u>
	<hr/> <u>\$2,291.50</u>
 Receipts	 <u>\$7,849.75</u>
Expenditures	<u>2,291.50</u>
	<hr/> <u>\$5,558.25</u>
 Profit divided:	
6% Dividend on investment	 <u>\$1,500.00</u>
Labor income	 <u>4,058.25</u>
	<hr/> <u>\$5,558.25</u>



*First Prize Shropshire Get of Sire at Chicago International, 1930,
 owned by Noel Gibson, Komoka, Ontario*

1930 Results The year 1930 was a very trying one for farmers. The prices of grain declined, the season was very dry, and altogether it was a very discouraging year. The results on Mr. Tolton's farm are the most practical kind of proof of the value of diversification in farm operations. His sales of livestock throughout the year furnished him with ample funds to carry on his farming plans, and left him with a surplus for the purchase of livestock to feed such grain as can be most profitably marketed that way.

His receipts from livestock began in March, when he sold two Shorthorn bulls of his own breeding, in the Brandon bull sale, for \$280.00 and \$155.00 respectively. He also sold two Yorkshire sows at the same sale for \$100.00 and \$91.00, and three Yorkshire boars for \$58.00, \$50.00 and \$42.50.

During the Spring and Summer he sold five bull calves at an average price of \$135.00; seven York boars at an average price of \$27.50, and seven York gilts at an average of \$30.00. He fitted some of his stock for the Manitoba Exhibitions and added to his farm receipts \$450.00 in cash prizes. These were useful sums of money to be coming in from time to time during the year.

For the year 1930 the results are:

<i>Receipts</i>	<i>Expenditures</i>
Cattle, 12 head	\$ 1,479.00
Hogs, pure bred	744.00
Hogs, market	332.50
Poultry and eggs	45.00
Cream	129.00
Prizes at fairs	563.00
Threshing	780.00
Miscellaneous	15.00
Wheat sold	52.20
 <hr/>	 <hr/>
\$4,139.70	\$1,978.20

His grain is still unsold, however, and must be added to the receipts. He has 4,200 bushels of oats, but this we will allow for feeding his pure-bred cattle, hogs and horses. He has 3,050 bushels of barley, and if we allow 1,050 bushels for feeding the stock carried over, or hogs sent to market in 1930, it leaves 2,000 bushels to be sold, probably by feeding the stocker cattle he has put in. This barley should be worth 40c per bushel for feed, yielding him \$800.00.

He has also 3,500 bushels of Marquis wheat, eligible for registration, and a price of 50c per bushel should be a very low valuation for seed. At 50c it would bring \$1,750.00.

We now have:

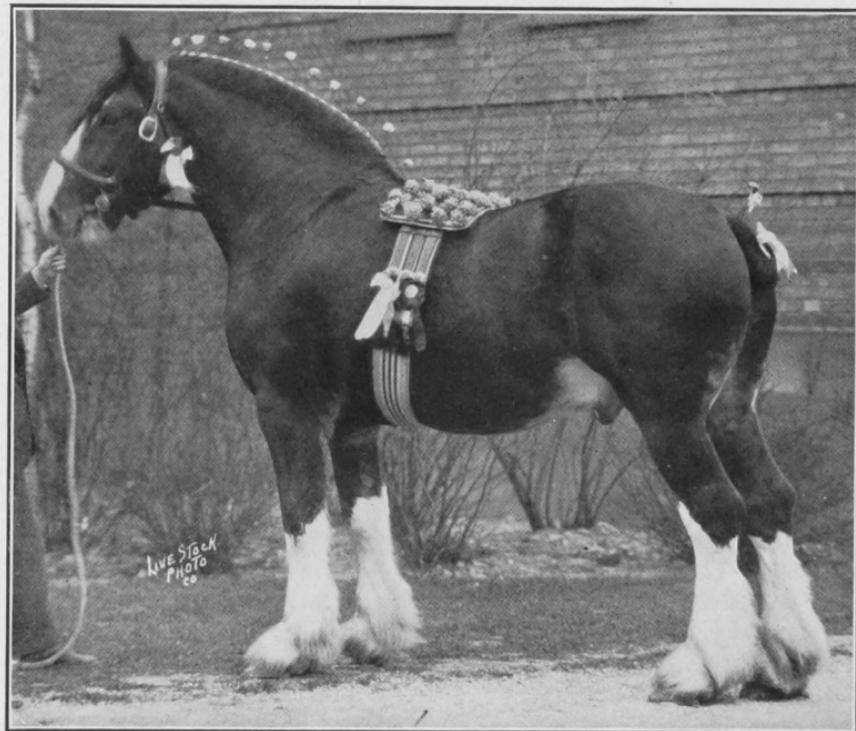
Receipts before enumerated	\$4,139.70
Barley to be fed	800.00
Wheat for seed	1,750.00
Total receipts	\$6689.70
Expenditures	1,978.20
Profits	\$4,711.50

This is quite a good statement for 1930. From these lists of expenditures it will be seen that no expenditures have been made for implements, except for repairs. Mr. Tolton's investment in implements amounts to about \$8,100.00. This was their value when new. In his general statement he has written off ten per cent. per year on these implements, but I am unable to give a complete statement of his assets and liabilities. He is improving his Shorthorns by the purchase of good sires, and is well on the way to having an outstanding herd. In 1930 he sold few, if any, females, and is reserving them for breeding purposes, so as to increase the numbers as well as improve the quality. In this way he is maintaining his assets in splendid shape.

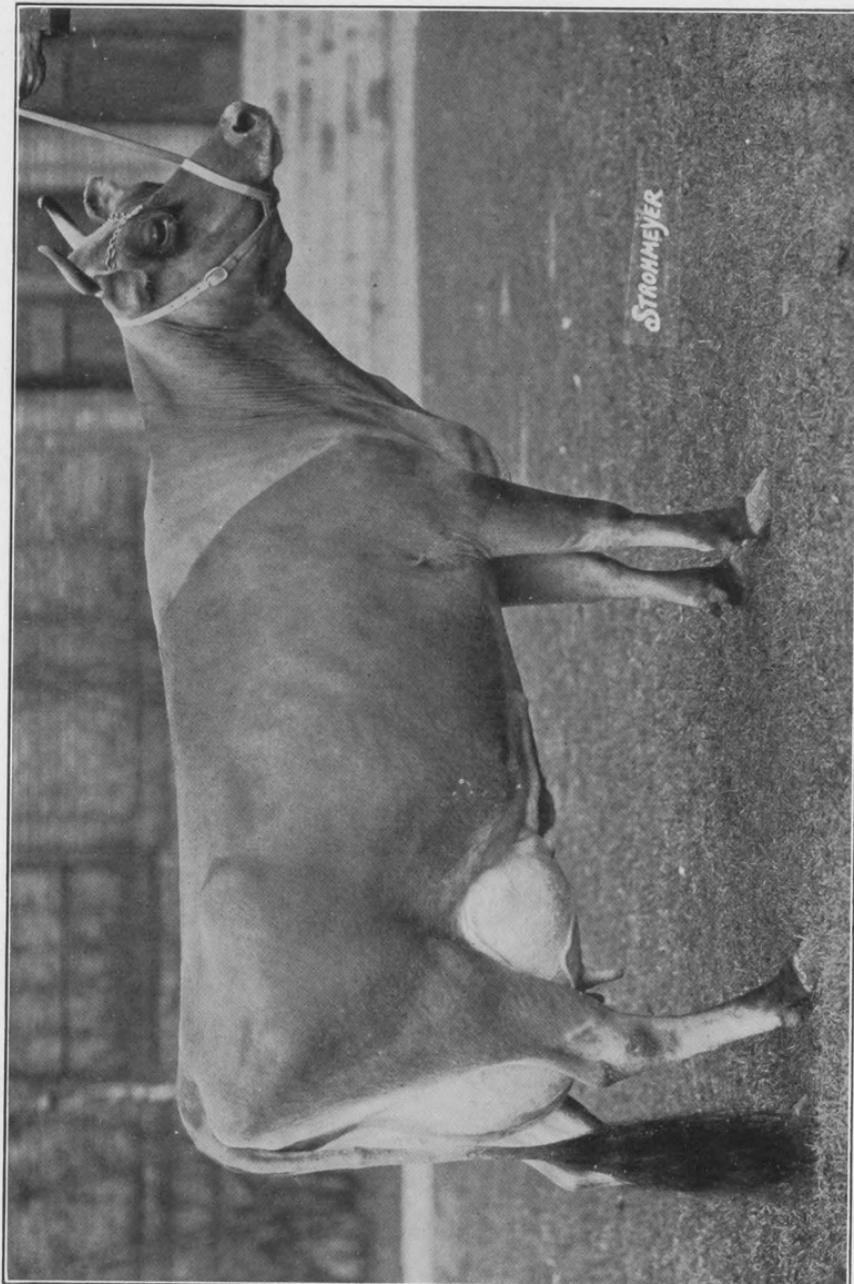
The living expenses of his family must come out of the profits, or income, of his farm, as does that of people in any

other business, the only difference being that the farm provides quite a share of that living, including a house to live in.

Mr. Tolton is a graduate of the Manitoba Agricultural College of the 1919 class, so he brings to his farm work a scientific as well as a sound practical knowledge of farming. He is a Director of the Dominion Shorthorn Breeders' Association for the Province of Manitoba, and attended the livestock meetings in Toronto in February of this year.



*Sansovino, Grand Champion Clydesdale Stallion, 1930 Royal Winter Fair, Toronto.
Owned by John Sinclair, Congress, Saskatchewan.*



Volunteer's Empress, Senior and Grand Champion, Toronto Royal Winter Fair, 1930.
Owned by Wm. Douglas Thomson, Brooklyn, Ontario

An Ontario Dairy Farmer William Douglas Thomson resides on Lot 27 on the 6th Concession of Whitby Township, about two miles west of Brooklin, Ontario. He is the third generation of Thomsons to live on this farm, and this young man is maintaining the traditions of his father and grandfather in being a capable and progressive farmer. "Shalomar" is the name Mr. and Mrs. Thomson have given their farm, and the meaning of this word, "Heart's Desire," is well exemplified in this delightful farm home.

Douglas Thomson is an intelligent young farmer, a graduate of the Ontario Agricultural College, is living on the land from choice, is keenly interested in his pure-bred Jersey herd, and has the ambition to build it up for profit as well as prize winning. He is carefully weeding out his poor producers, and though only breeding Jerseys for some three years, has an excellent group of cows in his barns now, and among them is Volunteer's Empress, that captured for Mr. Thomson the grand championship at 1930 Royal Winter Fair, and Busy Sweetheart, that stood second to her in the class.

Substantial and Not Elaborate The outbuildings on the Thomson farm were constructed for utility and not for show. They are good, plain, farmer's barns. The stables are commodious, with wide, cleanly swept passages behind the cows. The fittings are anything but elaborate, but are strong and useful, and the whole stable is kept in such a tidy condition as to give it the appearance of attractive usefulness. It is the cows, however, that are the greatest attractions in this barn; as Mr. Thomson pointed out—cows with records of eleven and thirteen thousand pounds of milk. He called our attention to a young cow just entering the record of performance, whose first butterfat test was 6.4%; and showed us some young things of outstanding promise that he has coming on. We observed that this man was bound to succeed as a dairy farmer because

of his keen interest in every animal on the farm, and his determination to cull carefully until he has eliminated all except high-class breeders and producers.

Results Achieved Mr. Thomson very kindly gave a statement of his farm operations for 1930. He is only beginning to make sales of pure-bred cattle, and so far these have been very limited. Reserving, as he is, the best heifer calves to improve the home herd, he has not sold high-priced females of his own breeding. In the course of the next year or two he will have some valuable young things to offer for sale, which should swell the cash receipts of his farm.

His herd sire is the imported bull, La Sente's Oxford Sultan. This bull won the progeny prize on the Island of Jersey, which establishes his record as a Jersey sire.

Mr. Thomson sells whole milk and gets a premium on account of the butter-fat test. He has a well-equipped milk house for reducing the temperature of his product before shipping, and in two years has had only one can of sour milk. A machine is used for milking, and it has given excellent satisfaction.



Farm Home of Fred Reid, Cardale, Manitoba.

1930 Farming Results

The year 1930 has not been a promising one for farmers, but it has been better for the farmer who feeds grain than for the one who sells it. It was only after midsummer that prices touched bottom, and the grain farmer was compelled to market his year's produce after that. The dairy farmer had the advantage of continuous marketing throughout the year.



Rhode Island Red Cockerel, approved son of hen with R.O.P. of 303 eggs.

Owned by University of British Columbia.

Douglas Thomson farms 244 acres, of which about 20 acres is woodland. In 1930 he had 14 acres of fall wheat, which yielded 420 bushels, 35 acres of oats that gave him 1,650 bushels, and 50 acres of mixed grain that threshed 2,750 bushels. He sold 150 bushels of wheat at threshing time, at 87c per bushel. The remainder he will use for poultry feed or for seed. He had 15 acres of corn, and has two silos, which hold a little over 100 tons each, and last year he had five acres of turnips.

The balance of his land is in hay and pasture, and he says that he never seems to have too much hay. The farm is worked with six horses; recently this number has been reduced to five. They are big, able horses of good Clydesdale type, and all fit to do a full day's work.

The Jersey herd consists of 33 breeding cows, which, with bulls and young stock, brings the full number up to fifty. The manure is all hauled to the fields in the Winter, where it is stacked in large piles, to be distributed with a

spreader after harvest, on what will be the corn and root ground for the following year. There are two hired men, one of them the dairy herdsman, but three men have been kept part of the time. This is a well-managed farm, with no frills, but the object is the ownership of a high-class herd of cows, and the proprietor is attempting this achievement in a way that is bound to succeed. His ambition is to breed a herd that will take its place in the front rank of Canadian Jersey cattle.

1930 Farm Statement The statement of the receipts and expenditures on this farm for 1930, as it appears here, is from the carefully-kept records of the proprietor.

<i>Receipts</i>	<i>Expenditures</i>
Milk sold	\$ 995.00
Fall wheat	1,860.00
Cattle sales	500.00
Eggs and poultry sold	45.00
	115.00
	45.00
	100.00
	656.10
	200.00
	24.00
	150.00
	107.65
<hr/>	<hr/>
\$8,808.50	\$4,797.75
<hr/>	<hr/>
Total receipts	\$8,808.50
Total expenditures	4,797.75
<hr/>	<hr/>
Net income	\$4,010.75

The farm is valued at \$35,000, so the returns would pay a dividend and a modest salary, but as a pure-bred livestock breeding enterprise it has excellent prospects.

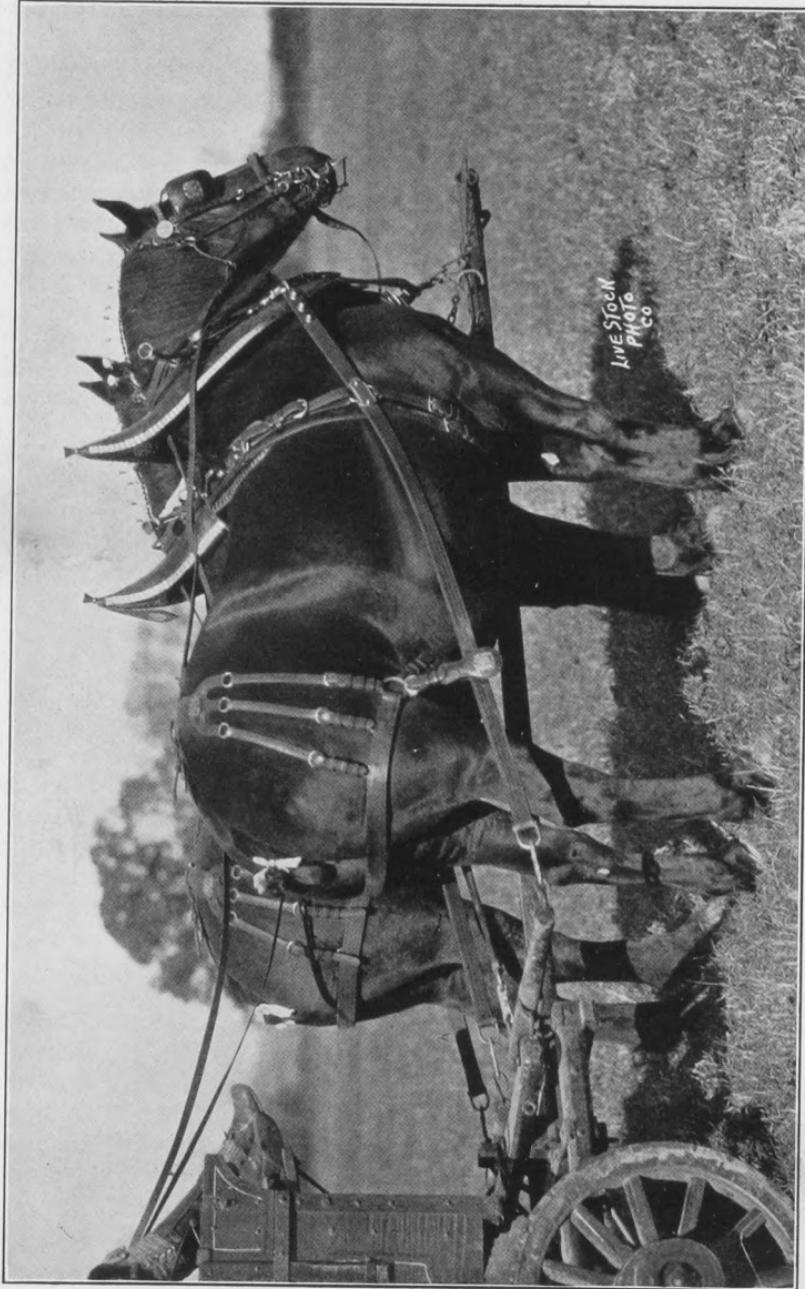
A Western Dairy Farmer's Successful Operations

I visited a dairy farmer who has been operating on the western prairies for some thirty years, and whose main help consists of two sons who are adept at the business of farming. One of them has a flair for machinery, which makes all the wheels about the place run smoothly, whether they be in a tractor, a milking machine, or a motor car.

This farmer was a pioneer and knows what it costs in time and toil to break prairie, clear brush, build barns and erect a dwelling-house that for attractiveness and comfort would meet all the demands of the most insistent.

Successful Dairying This family now farms 960 acres of land, some of which was bought at fairly high prices. In reply to a query as to how long they had been in the dairy business, the reply was—as long as we have farmed. The man who established this farm has great faith in cows. He has carefully bred up his herd over a period of twenty-five years, always purchasing a record of performance bull. For many years he weighed the milk from each cow, culled out the poor producers, and only added such heifers to the herd as were from the best milking and highest testing cows in the herd. The plan is to milk about 35 cows all the time, and he carries stock enough to have this number in milk. They operate with one tractor and twelve to fifteen horses. Probably some of the horses have an easy time. These men have gone out of pigs of late years, and depend for their revenue upon the sale of milk, grain and young stock.

While they claim to be dairy farmers, wheat is by no means neglected, and they usually have a good, substantial amount of this cash crop to sell. One outstanding feature of this farm's operations is that each year there has been carried over a few thousand bushels of grain as insurance against hail, frost or drought, so that the dairy has never been pinched for a little extra feed for the cows.



A team of Percheron mares that should please any farm boy

There is appended here statements of the operation of this farm for the last two years, 1929 and 1928, and also, as an example, 1925. Board for hired men is not charged, on the basis that the share of the family's living taken out of the farm produce would easily overbalance this.

The proceeds of the earned dividend and the labor income would have to be divided among the farmer, his two sons, and his daughter. This family, however, working together as a unit, would not be many years in providing each member with a fair-sized farm, so that each would have an owned business, with revenue equivalent to a good living.

The best plan for farming in Canada is the family farm, by means of which people may enjoy rural life and a reasonable income, which may include a few luxuries. This is the ideal system of settlement for our agricultural lands.

1929 Results The statements of this farm for the three years mentioned are as follows:

For the Year 1929

<i>Receipts</i>	<i>Expenditures</i>
Wheat	Seed grain \$ 63.00
Oats	Feed 73.50
Hay	Twine 102.65
Milk	Repairs to machinery... 200.00
	Repairs to buildings
	and fences 256.00
	Fuel and oil 855.20
	Insurance 65.90
	Threshing 317.50
	Wages 866.00
	Blacksmith 35.00
	Rent for extra land 459.50
<hr/> \$11,124.80	<hr/> \$3,294.25
Receipts	\$11,124.80
Expenditures	3,294.25
 Total earnings	<hr/> \$ 7,830.55



A Peace River district wheat field on the farm of Heber Theay, High Prairie, Alberta

Dividend 6% on \$50,000.00	\$ 3,000.00
Labor income	4,830.55
	<hr/>
Total earnings	\$ 7,830.55

This shows a family income that is very satisfactory, and at the same time is fully earned.

For the Year 1928

1928 Results

<i>Receipts</i>	<i>Expenditures</i>
Wheat	\$ 5,871.90
Oats	1,658.50
Hay	152.00
Cattle	160.00
Horses	100.00
Milk	4,524.00
Received hail insur.....	132.00
	<hr/>
	\$12,598.40
	<hr/>
Income	\$12,598.40
Expenses	4,149.50
	<hr/>
Total earnings	\$ 8,448.90
	<hr/>
Dividend at 6% on \$50,000	\$ 3,000.00
Labor income	5,448.90
	<hr/>
Total	\$ 8,448.90

A good deal of work was done every year in grubbing brush and bringing waste parts of this farm into production, which earnings do not show.

*For the Year 1925***1925 Returns**

<i>Receipts</i>	<i>Expenditures</i>
Wheat sold	\$ 4,180.00
Oats sold	1,326.00
Barley	44.00
Young cattle	127.00
Milk	4,358.00
Eggs, etc.	50.00
	<hr/>
	\$ 10,085.00
	<hr/>
Income	\$ 10,085.00
Expenses	4,233.80
	<hr/>
Total earnings	\$ 5,851.20
	<hr/>



Farm buildings of W. C. Cameron, Arcola, Saskatchewan.

It will be noted that substantial amounts have been expended each year in repairs to machinery. This may be accounted for by the fact that one young man on this farm, as before mentioned, is an adept with machinery and is constantly rebuilding some of the heavy machines used in brushing and breaking.

On this farm the dairy herd has not only been kept up to a standard, but it has been steadily improved by raising the best of the heifer calves and replacing the older cows with them. The entire herd of dairy cows has been bred on the farm and is a credit to the operators of this place.

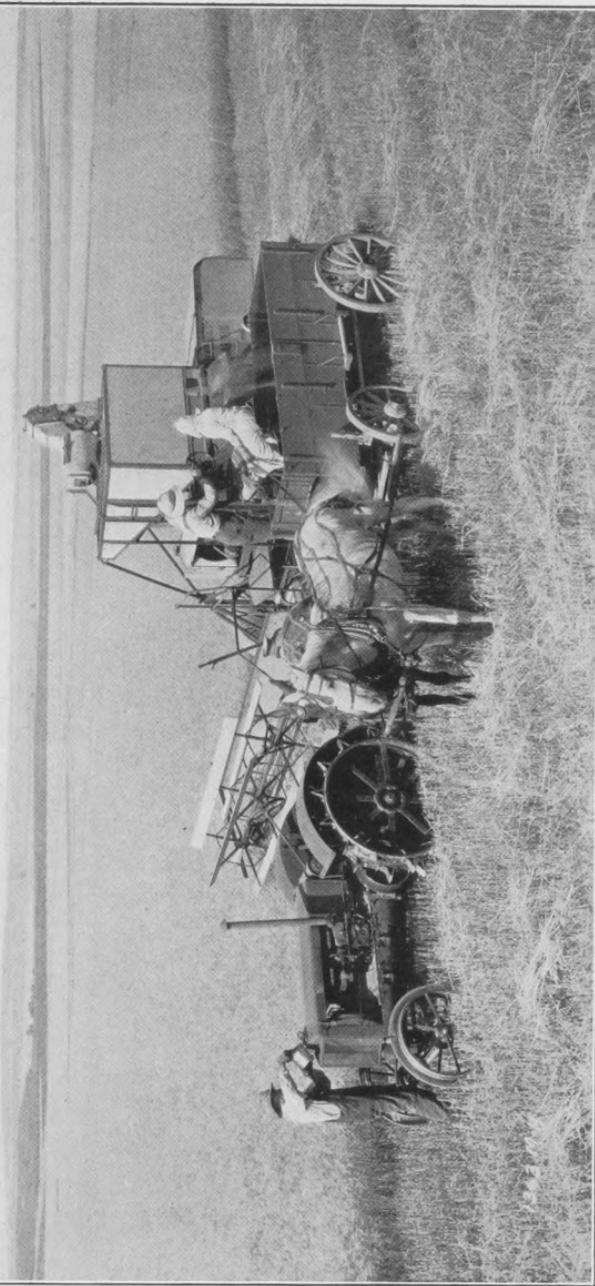
The brushing and breaking of this farm and the improvement of the dairy stock has added greatly to its assets, and would easily overbalance all depreciation in any of its possessions. As a matter of fact, this man and his sons have built up a valuable property that is a fortune in itself.

A Quarter Section Farm Farming a quarter section of land on the prairies is not regarded as operating on a very large scale, and yet there is room enough on 160 acres of land to grow a very considerable crop, and make a fair labor income for a man who has only a small amount of capital to invest, and does not desire to take on large liabilities.

Frank Sheppard is living on the N.W. $\frac{1}{4}$ of 16-45-27 west of the 4th Meridian. This quarter section farm is twenty-eight miles west of Wetaskiwin, Alberta. Mr. Sheppard operated an elevator in Wetaskiwin before moving on to the farm. He is handicapped by living so far from a railway, but has good land. His bins were bursting with grain and his livestock were sleek and fat when I visited him last October. The huge straw stacks, and the strong, bright stubble were also evidences of a bountiful harvest.

Mr. Sheppard has only about half the quarter section broken yet, and this year had seventy acres of crop, which

Harvesting, threshing and hauling away the grain in Alberta



yielded 3,500 bushels of grain. His threshing figures were:

20	Acres of wheat threshed	950 bushels
12½	Acres of rye threshed	576 bushels
14	Acres of barley threshed	510 bushels
24	Acres of oats threshed	1,465 bushels

Thus he had from 70 acres of grain a yield of 3,500 bushels, and he also had about 14 tons of green feed in stacks upon which to winter his cows.

Mr. Sheppard was proposing to feed all his grain if the prices remained low. He is milking four cows and has a very nice lot of hogs. A feed grinder operated by a gasoline engine does duty in furnishing feed for the hogs and cattle. Four horses supply the power for the farm, and the herd of cattle numbers fifteen.

Cash sales made by Mr. Sheppard during 1930 were:

Cream sold	\$120.00
Market hogs	570.28
Five young cattle	225.00
Receipts	<u>\$915.28</u>

As he did most of the work himself, his bills were very small.

Wages	\$ 50.00
Taxes	35.00
Threshing	100.00
Expenditures	<u>\$185.00</u>

Reserving 1,500 bushels of grain for seed, and feeding horses and young stock, and fattening hogs already sold, Mr. Sheppard has for his year's work, the value of 2,000 bushels of grain and cash receipts for \$915.28, less \$185.00—or \$730.28. In other years this grain would have made a nice income, but even this year the wheat, rye and barley are all worth at least \$20.00 per ton for feed, which would bring their value to at least \$1,000.00. This would bring

Mr. Sheppard's income up to \$1,730.28. As he bought this quarter section for \$1,200.00, the interest on his investment is not large. His house is small, but he has made it comfortable for his wife and small girl, and he contemplates building. The outbuildings are not large, but are well arranged and show his skill in planning and working with lumber. He has convenient arrangements, constructed by himself, for pumping, grinding and feeding.

Ontario Farmer The past year has not been a very profitable one for Ontario farmers. The selling prices of their products have fallen, and in many districts there has been a lack of moisture to grow heavy yielding crops.

Ontario farmers have usually only small areas to cultivate, and in most cases operate with livestock. Cattle feed-



*Group of Jerseys purchased at the Brampton sale of August, 1930, by
W. B. Cleland, of Troy, Ontario*

ing, dairying, keeping sheep, and hog raising have been the main enterprises on the average Ontario farm. This system does not produce fortunes, but it is fairly safe for a steady income, and you may be sure will provide steady work.

There have been years of high prices, when Ontario farmers made quite substantial sums of money, but 1930 was not one of these.

Hundred Acre Farm A farmer who resides some twenty-five miles from Toronto and operates a one-hundred acre farm, gave me a statement of his business for 1930. He has never owned more than this one farm, and, as he has no sons, has no desire to increase his holdings.

This man sells whole milk and depends upon milk, hogs and poultry for his income. In 1930 he grew six acres of corn for ensilage and three acres of roots. His grain crop consisted of nine acres of oats, which yielded 700 bushels, and 40 acres of mixed grain, which yielded 1,650 bushels, which was a lighter crop than he usually grows.

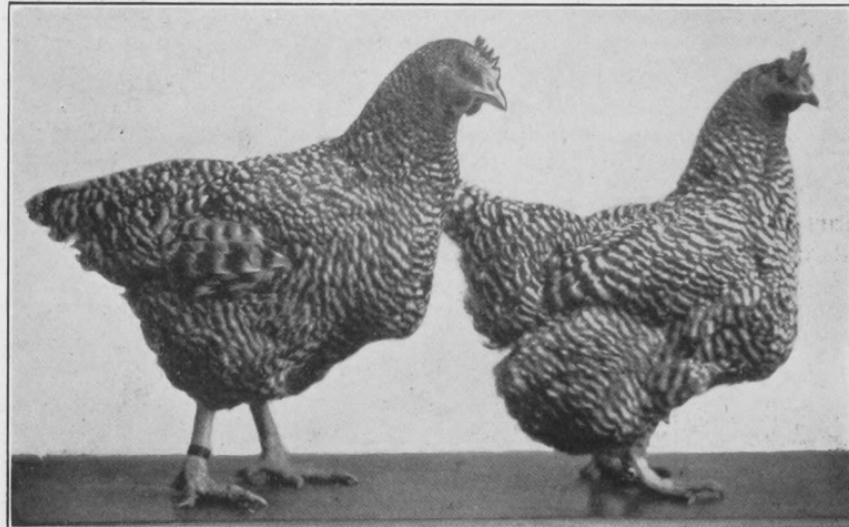
He is skilful with machinery, and I found that his investment in that line is not heavy. He has a tractor, bought second-hand ten years ago, and still operating his threshing machine and doing the fall ploughing. The threshing machine was old enough to vote ten years ago, but its labors are neither long nor hard, and it works well. A fourteen year old binder still cuts the crop. Four work horses are kept and 16 head of cattle. The plan is to have 12 cows milking in Winter and 10 in Summer.



Farm buildings of T. J. Graham, of Pennant, Saskatchewan

Receipts and Expenditures A fair statement of his 1930 operations is as follows:

<i>Receipts</i>	<i>Expenditures</i>
Milk sold	\$ 2,113.00
Hogs sold	960.00
Alfalfa seed	500.00
Poultry and eggs	260.00
	<u>\$3,833.00</u>
Taxes	\$ 200.00
Feed bought, concentrates	250.00
Wages paid	325.00
Gasoline and oil	62.50
Binder twine	20.00
Insurance	20.00
Blacksmith	18.00
Repairs on buildings and machinery	220.00
	<u>\$1,115.50</u>
 Receipts	 <u>\$3,833.00</u>
Expenditures	<u>1,115.50</u>
 Income	 <u>\$2,717.50</u>



Two registered Plymouth Rock hens, owned by James M. Scott, Sunny Crest Farm, Seaforth, Ontario. Left one has record of 208 eggs, averaging 25 ounces to the dozen. Right has record of 252 eggs, averaging 24 ounces to the dozen.

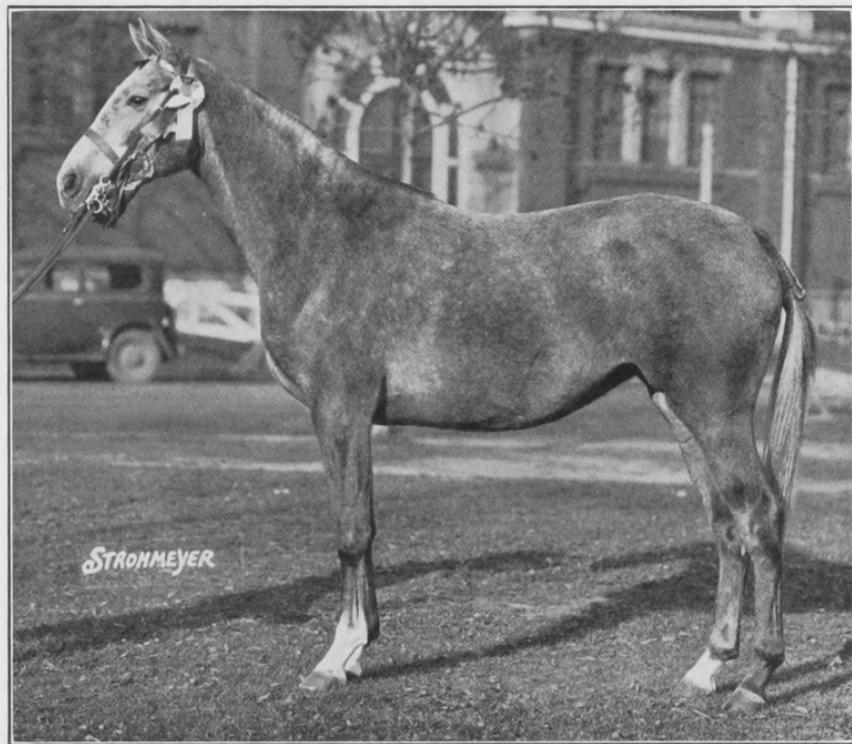
This man values his farm at \$14,000 at the present time, but would not offer it for sale at that price. It is choice land, in a good condition of tilth, and every acre is under cultivation. One field is down to alfalfa and from another he cuts hay. There is about 30 acres of pasture. No grain is sold, as it is all fed, and the bulk of it is mixed grain, consisting of oats, barley, peas and spring wheat, making excellent feed. About fifteen years ago this hundred acre farm made profits running as high as \$8,000 a year. This farm, like the others, provides the greater part of the living for the family residing on it.

Another Ontario Farm A farmer who lives about 35 miles from Toronto, but in another direction, and who has a herd of good commercial pure-bred Holstein-Friesians, gave me a statement of his operations on a 200 acre farm. This farmer plans to have 25 cows milking most of the time and keeps some 34 cows in all. He only retains the best of his heifer calves, about seven or eight each year, and the rest he sells for veal. He keeps only an odd good bull calf.

This man farms his land with six horses, but hires a tractor occasionally to speed up the work. In 1930 he grew about four acres of corn and 15 acres of sweet clover for ensilage. He has been summerfallowing about 10 acres per year to clean up weeds, but is of the opinion that the sweet clover crop may take the place of the summerfallow, and so keep all his land in production.

There is 10 acres of an orchard on this farm coming into bearing, that will prove a profitable asset during the next few years. All his grain crop in 1930 was mixed grain. He had 50 acres in mixed oats and barley, which yielded 3,500 bushels. He has been building up his soil with barn-yard manure, and this year used six tons of commercial fertilizer. He is improving his Holstein-Friesian herd by using a bull out of a dam with a 4% test for butter fat.

The buildings on this farm are in excellent condition. Both the house and barn have been fitted out with a view to comfort and appearance, and it would be regarded as a very substantially equipped farm. The operator has been a farmer all his life, with no other means of revenue. He values his property at \$25,000, though in times like these it would not realize that amount. There are two silos that hold 100 tons each, and some ensilage is fed in Summer, as he only keeps about 50 acres in pasture.



Blue Shadow, grey thoroughbred filly, Junior Champion at 1929 and 1930 Royal Winter Fair, Toronto. Owned by W. B. Cleland, Troy, Ontario

1930 Farm Returns This statement was collected very accurately from farm records and the farmer himself, and represents what he considers to be hardly an average year, that of 1930.

<i>Receipts</i>	<i>Expenditures</i>
Milk sold	\$4,760.00
Apples sold	550.00
Eggs and poultry	260.00
Cattle sold	310.00
Calves	105.00
	<hr/>
	\$5,985.00
	<hr/>
Total receipts	\$5,985.00
Total expenditures	2,366.00
	<hr/>
	\$3,619.00

A six per cent. dividend on his valuation of \$25,000 would amount to \$1,500. If a farmer is earning, in a year like 1930, dividends and salary amounting to the sum of \$3,600, together with the privilege of living in an attractive part of the country, he is not doing badly. This farmer is keeping his land in a good state of fertility, and is continually improving his Holstein-Friesian herd, so his statement of assets would show some earned increment.

The Value Of Results In Chapter VIII we have been able to give the statement of Robert Gratz, of Nobleford, Alberta, who is exclusively a wheat farmer. In this chapter we present the statements of J. H. Tolton, a Manitoba wheat and livestock farmer; of Wm. Douglas Thomson, an Ontario dairy farmer, and of Frank Sheppard,



A one-way disc or wheatland plow at work on a Manitoba farm.

a quarter-section mixed farmer in Alberta. These make very representative statements. Besides these, we offer the financial statements of a western dairy farmer and two Ontario farmers, whose names are not given, but the information is quite authentic.

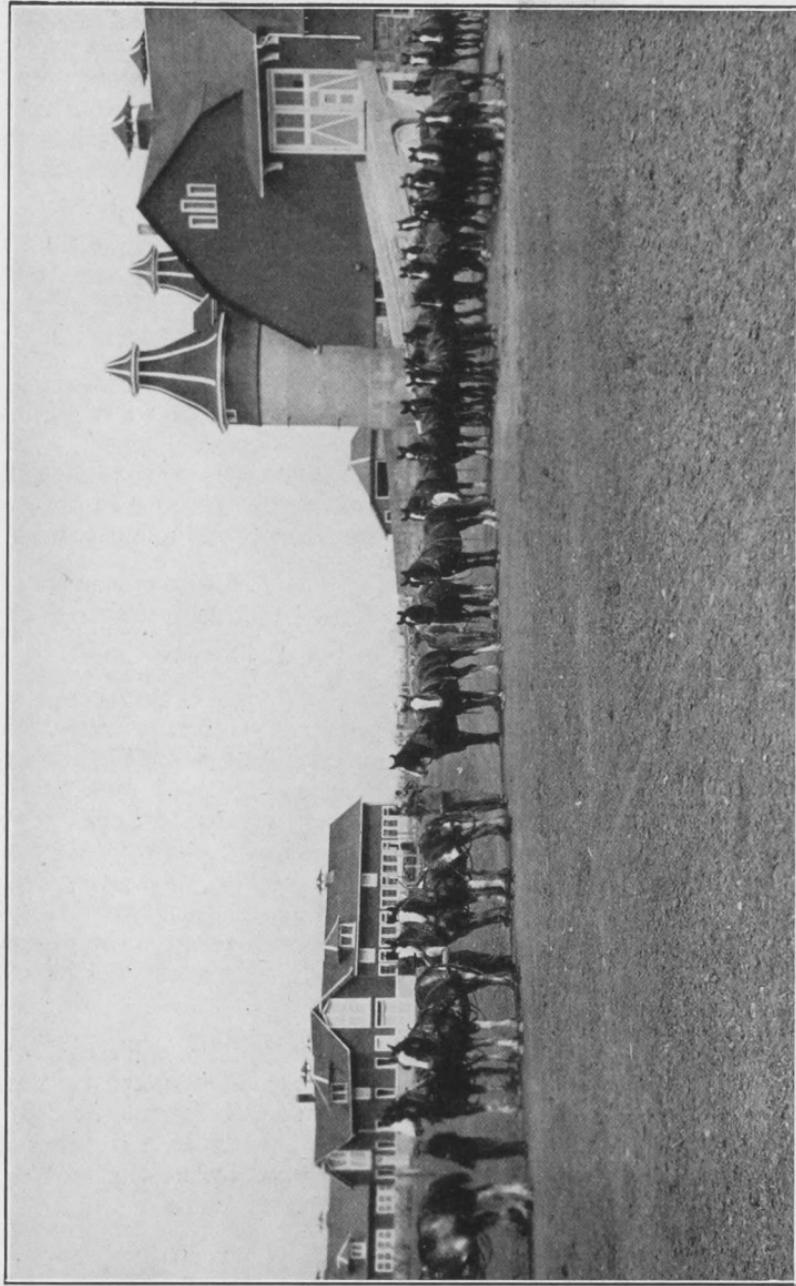
We greatly appreciate the privilege of being able to give information coupled with the names of these four farmers. We know how greatly it adds to the value of the information and to the character of this publication.

In the following chapter we are able to cite a number of prosperous farmers and give a few facts about each. This list might have been extended at very great length. Our object is simply to point out what some farmers have done that the information may be a guide for others in a business that draws more from experience than from any other source.

Agricultural education is simply learning how men have handled land and livestock successfully, and profiting by their methods and experience.

Accounting Systems These statements do not represent a complete system of accounting, as I have not been able to get a statement of assets and liabilities covering a period of years. Accounts have not been kept showing the profits upon different lines of farm operations. A statement, however, for a year like 1930, or statements covering a period of years, will show quite clearly whether or not these particular farmers are conducting a business that is reasonably profitable, and what the possibilities of farming are.

There is no doubt that more complete systems of accounting are required on most farms. These are not as difficult to install as they would seem to the farmer at first. It only takes a few minutes to make records in a notebook each evening, and then write the accounts up at the end of each week, or at the end of each month.



Farm teams leaving for the fields at the Saskatchewan University Farm, Saskatoon, Saskatchewan.

*Chapter XIII***SUCCESSFUL FARMERS**

SUCCESS in farming is not limited to a few people. You can travel for days in any province in Canada and find farmers who have established themselves upon the land under conditions of comfort that are not rivalled in any country in the world. Many of these men are in much better circumstances than they could have hoped to be in almost any other occupation.

The farmer gathers around himself on the farm his means of livelihood, and what he accumulates in wealth and comfort is at his hand to use for the benefit of himself and family. There is no business so peculiarly one's own as that of farming. So many people attempt it, under so many handicaps, however, that the wonder sometimes is that so large a number succeed. We are giving here a few evidences of results.

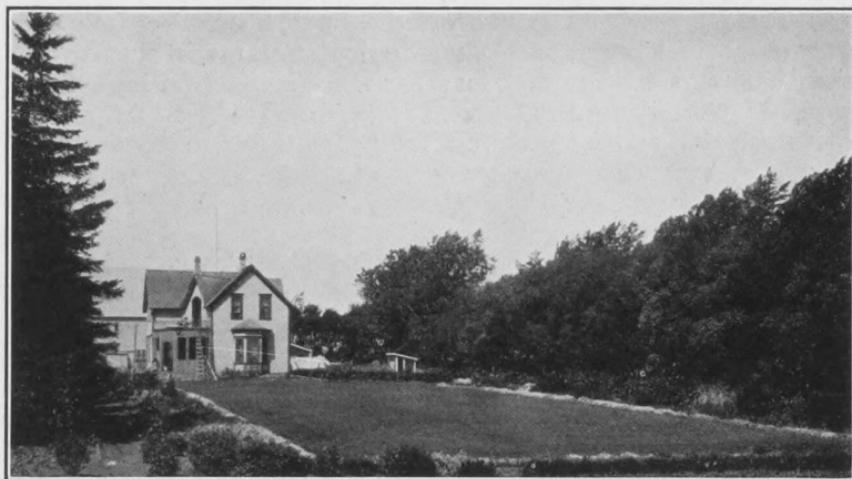
Manitoba Farmer Fred W. Armstrong has farmed near Carman, Manitoba, for twenty-three years, and in that time has bought and paid for \$30,000 worth of land. This in a word sums up his success. He has 1,120 acres of land, and in October of 1930 had 82 head of cattle, of which eight were milking cows, and 38 hogs. He had 160 acres of oats, 100 acres of barley and 50 acres of buckwheat.



Fred Armstrong's farm buildings, Carman, Manitoba.

His comfortable, well-appointed home is illustrated in this publication, and is evidence of his well-earned prosperity. In the 23 years in Manitoba, Mr. Armstrong says that he made money every year but 1916, when his crop was ruined by rust. The prices of cattle and hogs will determine the results for the 1930 crop, which are by no means up to the mark.

A tractor and twelve to sixteen horses furnish power for this farm. In speeding up work, he says, the tractor is to horses as the motor car is to a buggy.



Wellesley White's farm home, Thornhill, Manitoba.

Early Settler Wellesley White, of Thornhill, Manitoba, pointed out a field on his farm that had grown its fifty-first crop without a failure. He has a section of land and began farming in Manitoba thirty-eight years ago.

Mr. White has a herd of 33 pure-bred Shorthorn cattle, and they have been a continuous source of revenue to him over a period of twenty-five years. He farms with a tractor and two eight-horse teams. Sweet clover is his ensilage crop, and in 1930 it grew eight feet high, and 17 acres of

this crop filled a silo of 123 tons capacity. His opinion is that crops ripen too unevenly in his district to use a combine.

Mr. White keeps four brood sows and milks a few cows, selling cream. His attractive home, with its tasteful surroundings, is illustrated in this book, and speaks for itself.



Brae Lodge Nonpareil, bred and owned by T. A. Russell, of Toronto. In 1930 this heifer was Grand Champion Shorthorn Female at Brandon, Calgary, Edmonton and Ottawa Exhibitions, Junior and Reserve Grand Champion at London and Royal Winter Fair, Toronto.

Pioneer in Pure Breds The name of Andrew Graham, of Pomeroy, Manitoba, has been connected with the breeding of pure-bred livestock ever since that business began in Manitoba. Half a century ago Mr. Graham settled on the prairies in Manitoba, and built up a farming estab-

lishment for himself and his family, which stands today as a monument to his achievements in agriculture.

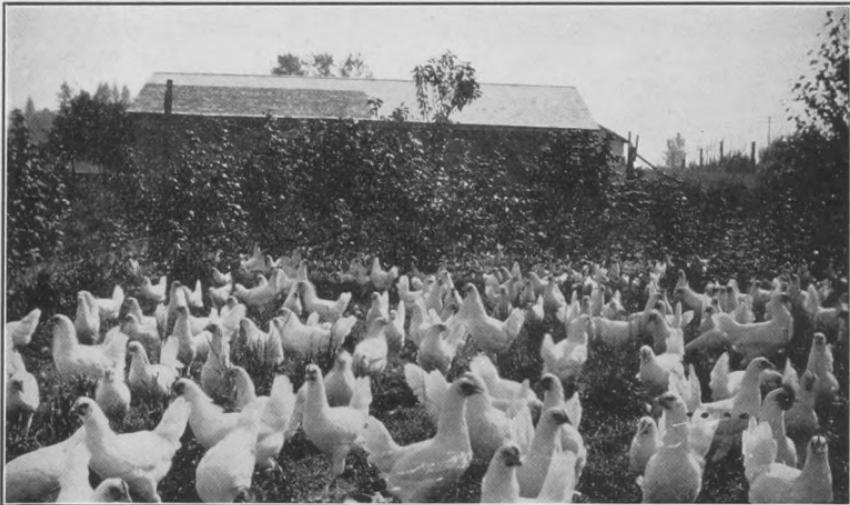
Mr. Graham is enjoying the afternoon of a busy farmer's life, and the next generation is carrying on successfully.

Quarter Section John Loblaw has retired to a quarter section farm east of Carman, Manitoba. For years he was quite a large operator, but there being only himself and wife, he sold his larger holdings and is working a quarter section with a six-horse team.

In 1930 he had 90 acres of crop, 30 of which was in wheat and he had 30 acres of alfalfa, timothy and alsike.

He has a few good cattle, a dual purpose Shorthorn bull that won second place at the Toronto Royal Winter Fair, and a very attractive bunch of 25 grade Oxford ewes.

"Did you make any money on a quarter section in this dull year of 1930?" I asked him. "Well—yes," was his reply. John Loblaw would always be doing quite well, and Manitoba has few better citizens.



White Leghorns on a British Columbia Poultry Farm

Moose Jaw Farmers In another chapter mention was made of W. J. F. Warren and F. H. Jones, both of whom farm just north of Moose Jaw, and who had such a struggle to secure a supply of water for their stock.

Mr. Warren has been a wheat farmer on a considerable scale, but at the same time has had a substantial income from beef cattle, and a fair amount from milk.

Mr. Jones has been a producer of both wheat and milk and in quite a large way. His annual income from milk has reached quite large figures, and both these men have built up fine farming premises.

Early Westerner James A. Smith, of Duff, Saskatchewan, went to Manitoba from Toronto, Ontario, in 1896, and worked as a hired man for T. C. Norris, afterwards Premier of Manitoba. He bought a half section of land in 1897 for \$2,360, making a payment of \$360 on it. He sold Number One hard wheat for 50c per bushel the first year he farmed. In 1901 he moved to Wolseley, Saskatchewan, and brought with him \$5,400 in cash, eight horses and 18 head of cattle, which he kept trading until he had all females. In the same year he drove from Wolseley to Duff, near Melville, and homesteaded.

Mr. Smith kept adding to his holdings, until now he has three and three quarter sections, or 2,400 acres. He has always kept livestock, and several times they have saved him. When the heavy crop of wheat was frozen in 1907, Mr. Duff had 365 acres, and it was not worth cutting. He had, however, 105 head of cattle, and he turned them in. They ate the heads off the wheat and were in splendid condition in the Spring. He sold \$600 worth of cattle for beef, which enabled him to continue farming without going into debt.

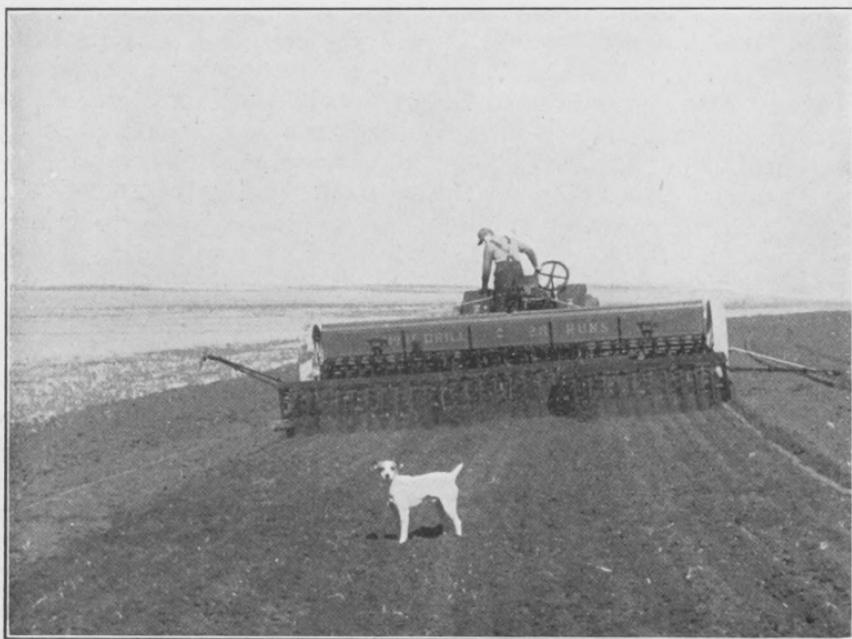
Mr. Smith has been growing oats rather than wheat, and one year sold \$17,500 worth of oats. His land and other property is worth well over \$50,000, and he is an example

of a farmer who has built up a competence for himself. He was a son of the parsonage, so had to learn farming as an employee on a farm.

In the Fall of 1930, Mr. Smith threshed:

9,150 Bushels of winter rye off	335 acres
1,642 Bushels of spring rye off	45 acres
4,400 Bushels of oats off	150 acres
1,325 Bushels of barley off	42 acres
<hr/>	
16,517 Bushels of grain off	572 acres

He also has a silo half full of sunflowers and 65 loads of sweet clover hay. This farmer will be able to feed a few beasts over winter. He had 35 hogs and 20 store cattle on feed in October, but purposed adding to the number. He farms with horses and one 15-30 tractor.

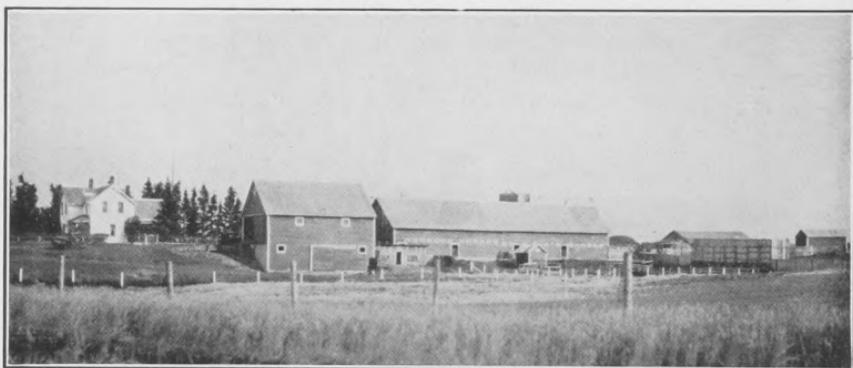


Seeding with 28-run drill

Substantial Alberta Farmer

Percy A. Switzer, of Lacombe, Alberta, can be classed among the substantial and successful farmers of the Province of Alberta. He and his sons, all of whom have attended the Olds School of Agriculture, have built up a property that might be conservatively valued at \$60,000. They have a herd of Shorthorn cattle that will rank well up among the herds of that province. They feed their cattle well and bring out their young bulls in attractive condition.

The largest single item from which this farmer's income is derived will likely be pure-bred cattle, but it is by no means his only source of revenue. He grows a few thousand bushels of wheat and breeds a few hogs.



Farm buildings of Percy A. Switzer, Lacombe, Alberta.

Mr. Percy Switzer is a good example of an industrious, competent farmer, who has made steady progress on his land, and whose business will not be destroyed by one or two bad years. He farms with horses and one tractor, does not use a combine, but has a power binder operated with a take-off from the tractor. He lives in a modern home, as will be seen from the illustration of his buildings in this publication.

Aberdeenshire Farmer Wm. Sharp brought with him to the Lacombe district in Alberta the thrift and industry that has made Scottish farmers in Aberdeenshire famous. He spent a few years in Ontario, near Guelph, when first coming to Canada, but was one of the early settlers in this part of Alberta. A man of his acumen might be depended upon to select good land, and in this particular he made no mistake.

Mr. Sharp brought his fondness for Shorthorn cattle from Aberdeenshire to Canada. He knew Amos Cruickshank and his rent-paying cattle at Sittyton, and Mr. Sharp's ambition has been to breed good improving bulls for Alberta ranchers. In this he has succeeded well, as animals from his herd have always been in strong demand at the Calgary



Farm home of J. L. Walters, Clive, Alberta

bull sales. He has been ready to pay a price for a good, prospective herd sire. He took a bull out of a public auction in 1920, at \$2,000, and has since stated that he never spent money in cattle to better advantage.

Mr. Sharp lives in a splendid farmhouse with all modern improvements, and is in a position to indulge himself and family in any luxury he might choose. He grows good grain crops, but always has more than one or two sources of income. Mr. Sharp's farming operations have been a decided success. He farms with horses and a tractor.

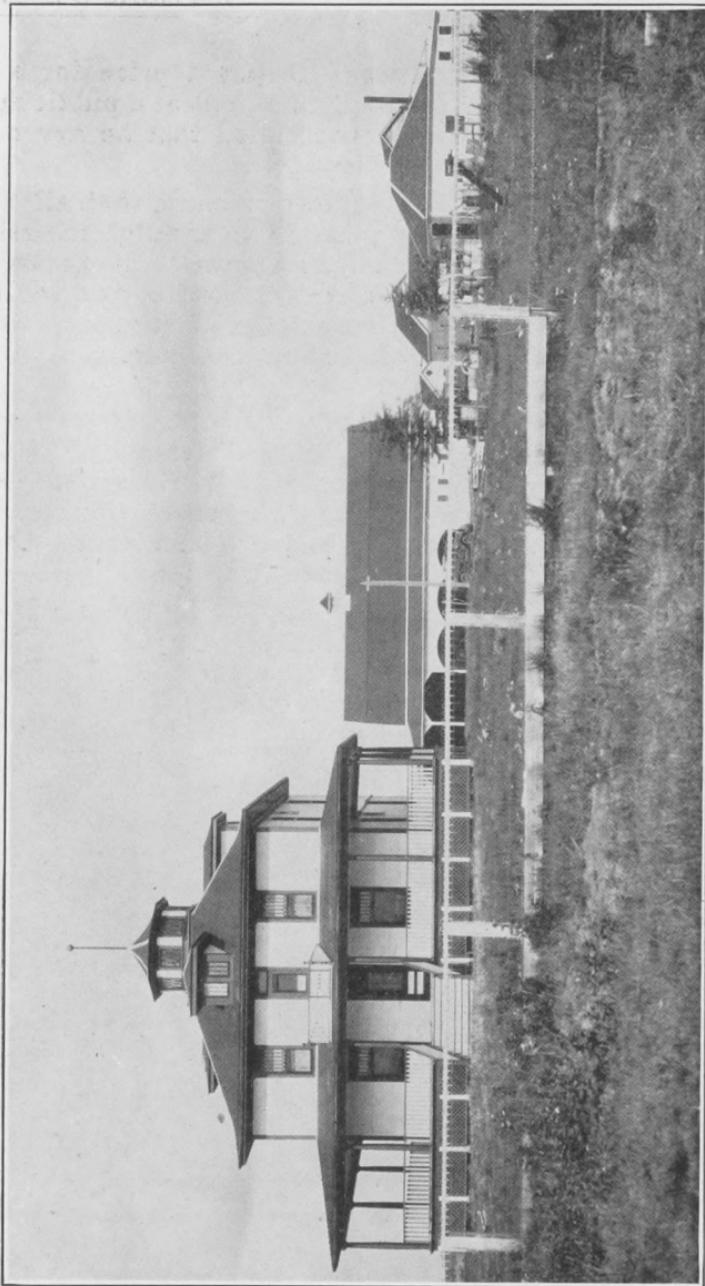
Built Up Good Business Richard Ballhorn, who farms east of Wetaskiwin, in Alberta, has seen his capital multiply by ten since coming to Alberta. He farms 800 acres. The chief sources of his income are from the sale of hogs, cattle and grain. He plans to feed his grain when the price drops, and to feed some of it in any event.

The Wetaskiwin district has a great many successful farmers, and Mr. Ballhorn is among the best of them. His farm buildings are shown in this publication.



Richard Ballhorn's farm home, Wetaskiwin, Alberta.

The farm buildings of Pierre Berube, Beaumont, Alberta



Red Deer Farmer A. G. Schoch, of Red Deer, Alberta, is a successful farmer, who spent his first two years in the province as a hired man on a farm. He bought his farm of 181 acres in 1919, when it was almost completely covered with brush. He rents 320 acres, which he considers the least expensive way of operating, as he has cleared brush off the rented land in return for its use. He is a power farmer and works long hours in the Spring to complete his seeding at the earliest possible day. For three years he has cut his crop with a combine harvester.

Mr. Schoch grows some 350 acres of grain, but he is essentially a livestock farmer, and last year fed off 230 pigs. He has a useful herd of Holstein cows and can meet the dull times with that confidence so important to agriculture.

Beaumont Farmer Pierre Berube left the Province of Quebec for Alberta thirty years ago, and borrowed the money for his railway fare. He bought his first quarter section for \$700, and now owns 2,080 acres of splendid land well equipped with buildings and machinery. There is an air of prosperity in the appearance of this farm, as will be seen from the illustration of his buildings, and the more you examine into its operation the more certain you are of Mr. Berube's success.

This farmer's crop last year was 650 acres of Garnet wheat, 100 acres of oats, five acres of sunflowers, 450 acres of summerfallow, and the balance in hay and pasture. Two silos, holding 90 tons each, are filled to feed the dairy cows in Winter.

While a large grower of grain, Mr. Berube milks from twenty to thirty cows, and has fed off as many as 400 hogs in a year. He has a splendidly equipped slaughter-house and kills a number of his hogs at home, selling the pork. In this way he makes some additional profit. He sells cream and utilizes his skim milk for feeding calves and pigs.

He speeds up his farm operations with two 15-30 tractors, and has two motor trucks for the delivery of his grain and other farm products.

This splendid farming establishment is a monument to the industry and ability of its owner, and is an evidence of the opportunities offered by prairie farming.

Scotland to Saskatchewan Robert Rousay came to Brandon, Manitoba, from Scotland, in 1889. He brought no money with him, and when he got on the train for Yorkton, Saskatchewan, where he knew some people, he had only money enough to buy a ticket to Salt-coats. He homesteaded the N.E. $\frac{1}{4}$ 36-25-5-2, and is still farming in this locality. This canny Scot now owns four sections of land, and has about 600 acres under the plow.

There is a slough, or small lake, on his land, as on the prairie he wanted to be certain of a water supply. In spite of all the attractions of grain farming—and he has grown and sold a good deal of wheat—Mr. Rousay has always pinned his faith to livestock. He has always milked a few cows and fed a few head of beef cattle.

The group of feeder cattle in this man's yard last November was ample evidence that this Scotsman, "kenned a beast," and was not satisfied except he had good individuals and they were always in good condition. He keeps a good Shorthorn bull and prefers to breed his own feeder cattle.

Mr. Rousay's testimony is that the cattle enabled him to pay his accounts. Livestock, in his opinion, is the sheet anchor of farming, and he would not think of depending



Farm of David Baskerville, Boissevain, Manitoba

upon grain alone. This man is regarded as one of the most substantial farmers in the Yorkton district. He has always worked upon sound lines, and his constant practice has been to "pay as you go." The result is that one or two years of depression can have little effect upon his farming enterprises.

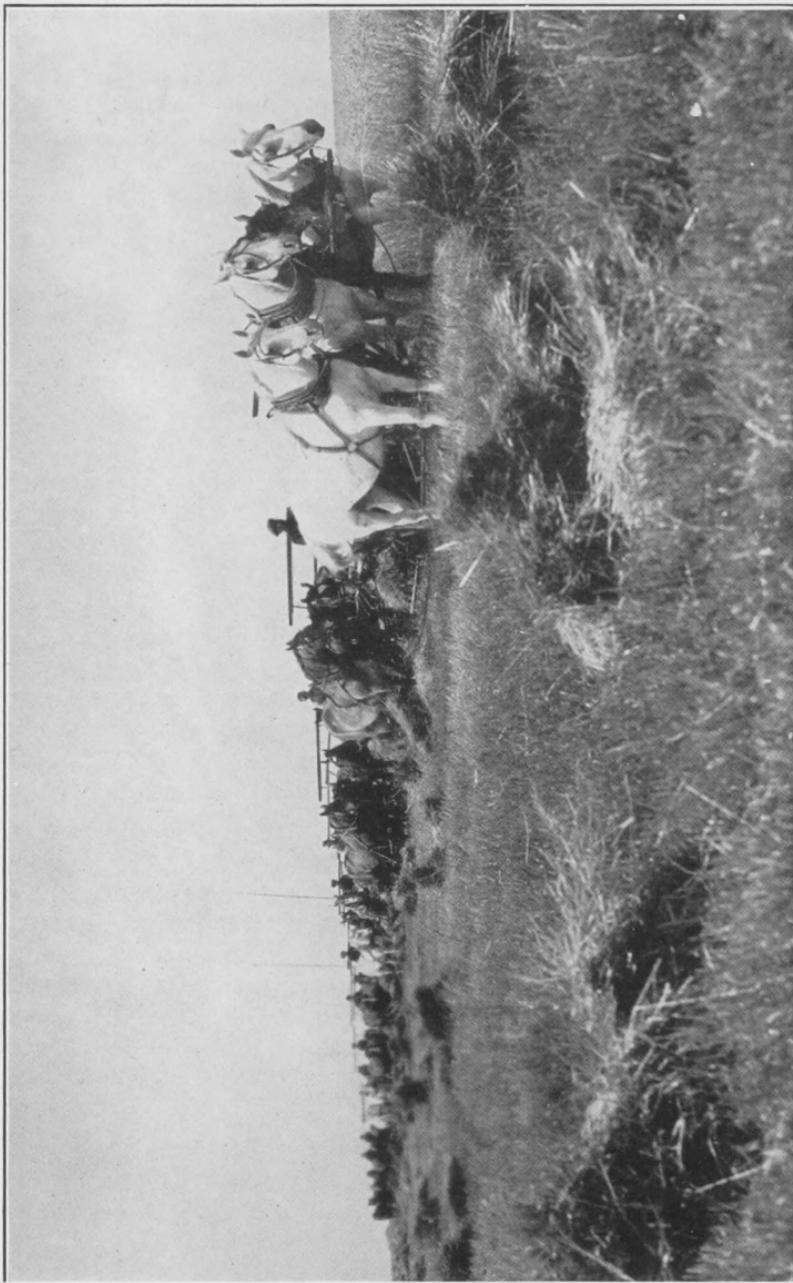
Andrew Anderson Andrew Anderson, of Alsask, Saskatchewan, is not an ordinary farmer. He has that rare ability that takes a man to the very top in any business.

Andrew was born in Sweden and came to the United States in 1894. He worked at several occupations in the next few lean years in the great Republic, but as his people were farmers in Sweden, Andrew wanted to own some land. He went west from New York, and at the Alaska and Yukon Pacific Exhibition in Seattle he was attracted by the Canadian exhibit.

He visited Alberta late in 1909 and filed on N.E. $\frac{1}{4}$ 22-29-5 as a homestead. He had then to drive forty miles from a railway to reach this land, but he wished to obtain both a homestead and a pre-emption, and this was one of the few localities in which both were available. In the Spring of 1910 he began operations on this homestead, and his entire assets were valued at \$1,500, which was money he had earned working in the United States.

The Alsask district where he settled was at that time a wind-swept, treeless prairie, with a reputation for having a light rainfall. Mr. Anderson began planting trees almost at once. The neighbors were quite certain these trees would not grow, but in a few years they too were planting trees, and now Mr. Anderson has a plantation of some fifteen acres about his buildings, which gives them a very delightful and home-like setting.

Mr. Anderson is essentially a wheat farmer. His entire farm income is derived from the sale of wheat, but he keeps a few cattle and milks a few cows. He also raises more



Ten four-horse binders cutting a 640-acre field of wheat on the Canner Farm, owned by
A. A. Argue, Rouleau, Saskatchewan

hogs than he requires for farm use. This capable farmer has followed the plan of living off the farm as largely as possible, and of always having plenty to eat for man and beast.

Additions were only made to Mr. Anderson's holdings in land when he had the land he already possessed fully paid for. In another chapter mention is made of his provision for horse feed and his plan of keeping only useful horses on his farm.

This man's holdings now consist of 4,340 acres, and his land and chattels are free from all encumbrances, while a snug fortune in the shape of a surplus has been laid by. Mr. Anderson's first big year in wheat was in 1915, when he had 23,000 bushels; in 1916 he had 24,000 bushels. His yields then fell off until 1920, when he again had 24,000 bushels. He reached his maximum in 1928, when he harvested 52,000 bushels. The year before this, 1927, he had 50,000 bushels. His 1929 crop only yielded eight bushels per acre on 1,200 acres, but in 1930 his production was 42,000 bushels.

Mr. Anderson has been able to keep noxious weeds well under control. Pig weed is his greatest enemy. Perennial sow thistle, quack grass and Canada thistles are not troubling him. In 1927 he was able to sell 32,000 bushels of wheat for seed, and it netted him \$1.43 per bushel. He marketed altogether that year 47,000 bushels of wheat. His costs of operation, in recent years, have been running from \$17,000 to \$20,000, which he says must be reduced on account of the low price of grain.

In 1930 Mr. Anderson cut about one-third of his wheat with the combine harvester, using the swather on some of it. He operates one tractor and does the balance of his work with horses. He plans to summerfallow about 40 per cent. of his land each year, so that practically all his wheat is grown upon summerfallow.

If I was going to make a calculation from what I know of his business, I would estimate that Mr. Anderson has made \$200,000 in the twenty years he has been in Alberta. During

this time he had six rather lean years, his wheat averaging only $10\frac{1}{2}$, $9\frac{1}{2}$, 13, 8, 13 and 8 bushels per acre, respectively, in these six years. Fortunately they did not run consecutively. He had some banner years as well. In 1913 his average yield was 45 bushels per acre, in 1915 he again averaged 45, in 1916 he had 33, in 1923 his yield was 30, in 1925 it was $24\frac{1}{2}$, in 1927 it went up to 40, in 1928 it reached $31\frac{1}{2}$, and in 1930 his average on 1,500 acres was 28 bushels.

Few people can farm on a large scale as successfully as Andrew Anderson. He is a master manager, but in a smaller way these farming opportunities are open to intelligent and industrious men on the western prairies, many of whom are attaining a considerable measure of success.

In Every Locality In every locality that I know well, where the soil and climate are reasonably adapted to the growing of crops, numbers of successful farmers can be found. They have succeeded by adopting plans and methods suited to their situation, and then have carried them into effect.

They have learned the sources of both their profits and their losses, and have tried to multiply the one and eliminate the other. This is the only way to succeed in business, and farming is no exception.



Farm home of J. A. Fraser, Beulah, Manitoba

Chapter XIV

FARM BOOKKEEPING

FARM bookkeeping has always been rather difficult to install. So many farmers have no experience in keeping accounts of any kind, and they seem to think it is a very complex business.

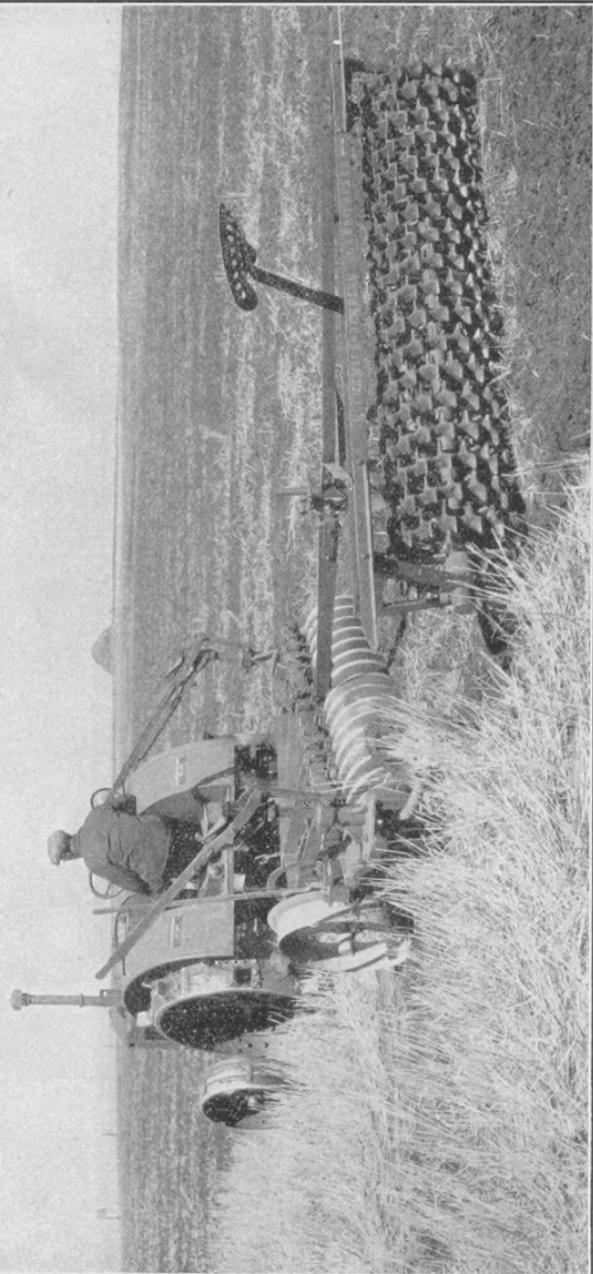
Keeping accurate cost accounts on a farm is not easily done, and it is inadvisable for the ordinary farmer to attempt this at first. Later on he may make his system as elaborate as he pleases, but in the beginning, a system of records that will show him the results of his year's work, and will indicate what part of his business is profitable, and where losses are made, is quite sufficient.

Simple Form Of Accounting The simplest form of accounting that will suffice, should be the farmer's first aim. We are past the stage of disputing the value of farm accounts. Everyone recognizes that no business can be as successfully operated without records being kept, as it can when data is available to show where profits are made or losses are entailed.

A system of farm bookkeeping to be effective should enable the farmer to take stock of his position at the end of every month at least. Especially is this true of the farmer who keeps livestock and has several sources of income. He should base his plans to sell or buy during the current month upon the results of the months just past.

Some records lend themselves to convenient entries every day, others may necessitate the keeping of a sort of scribbling book, in which transactions are entered, and then posting them in a farm account book at the end of the month. Either plan entails very little labor, and in any event it should be regarded as part of the farm work, and it is a very important chore that should not be neglected.

Tilling with a wheatland plow and land packer on the farm of Andrew Schmaltz, Beiseker, Alberta.



Make An Inventory The first step in the keeping of farm accounts is to make an inventory of your entire stock-in-trade, beginning with the farm, and enumerating every possession of any value on it.

A convenient form of inventory, that may be ruled in a blank book, is shown on page 187. It provides for recording the value of the different items at the beginning and at the end of the year.

A two-year-old heifer will have increased in value at the end of the year if she has come into profit and is making a good cow. A horse that is ten or twelve years old will be depreciating in value each year. An old implement may have been replaced by a new one during the year. These facts can be recorded in such a way as to identify the item.

These two columns of values can be balanced at the end of the year, and the result will show whether the farmer's assets have increased or decreased in value during the twelve months.

Fix Fair Values In making out an inventory do not over-value your land or your chattels. It is a bad plan, during inflated prices, to place too high a value on your livestock. It may make you feel rich for a short time, but you may be certain that there is a period of deflation to follow, and when it comes you will have some extra bookkeeping in reducing your valuations.

A much better plan is to keep your inventory within bounds, and when you make sales at high prices you will have greater profits to record.

Value of Farm Machinery Farm machinery should have about 10 per cent. of its value written off for the first five years, and this percentage should then be regulated according to how the machine is wearing. New machines lose value as soon as they become second-hand, and will not sell for more than half their original price at the end of five years. There are some implements, such as

plows, that have a fairly long life, and the depreciation might be rated at less than 10 per cent. per year after the five-year period. It is well, however, not to have implements valued too high.

A convenient form of inventory is shown in the forms appended to this chapter.

Keeping Records If a farmer is keeping poultry or milking dairy cows, he is engaged in two lines of farming that lend themselves to record keeping, and unless careful daily accounts are kept of the production of these two branches, the results may be very uncertain.

Poultry And Eggs Poultry should form part of every farm's operations. It is the sort of side line from which a substantial amount of cash can be collected, but only by the keeping of records are you constantly aware of just how faithful, in the production of eggs, your hens are.

A simple record of the number of eggs gathered each day, with a statement of the number of hens kept, often tells a very interesting story. Hens are sometimes just kept, and what eggs they lay are collected, but if records are made daily and you find that your fifty hens are only averaging about one dozen eggs per day, in their best laying months, you will be very likely to look these hens over and ask them a few pointed questions.

Records have a very arresting effect upon everyone who keeps them. When you put down the facts about any feature of your farm business, and find that it is losing money for you, there is little doubt about your taking some immediate action. Losses may go unnoticed when you have only a suspicion that they are taking place, but they will soon be stopped when you are faced with facts from your own records.

*"For facts are chields that winna ding,
An dare'na be disputed."*

A very simple record for keeping accounts of your poultry production is given in the appended forms. Books can be secured for this purpose, but a good plan to begin with is to rule these forms on the pages of a school scribbler, and if you have a boy or girl of school age, either one will be greatly interested in keeping an account of what the hens are doing. The feed will be easily calculated at the end of every month by multiplying the daily rations by the number of days in the month. If feed is purchased, its cost is easily recorded. Keep these records, and if they do not show reasonable profits it is high time for something to be done about your henhouse.



Tomac Captain's Valentine, Junior Champion Guernsey Female, 1930 Royal Winter Fair, Toronto. Owned by F. M. Tobin, Woodstock, Ontario.

Milk Records The plan every dairy farmer should follow is to weigh the milk of each cow at each milking and have a sheet or book in the stable where he can conveniently record the result. There is no other way of absolutely determining the production of cows, or whether or not they are profitable to keep. Tests should be made for butterfat of the milk of each cow, several times during the period of her lactation.

There is no getting away from this plan as the only satisfactory way of culling your herd and making it more profitable. The Dairy Commissioner in your province will assist you in securing milk sheets for keeping records and also in having tests made for butterfat content.

Your farm account book should provide a daily record for the total milk production of your dairy herd, showing also the number of cows and the average production. This form also can be ruled in a scribbler or notebook, with very little trouble.

A breeding and calving record should also be kept for your cows, and care should be taken to retain for cows in the herd the heifer calves from your highest-producing cows. Daughters of all cows, producing both a high test for butterfat and a generous flow of milk, should not be sold on any account. They should be retained in the herd and developed for records of performance. If they must be sold to reduce the number kept, they will bring much larger prices after having made records.

Convenient forms for keeping monthly milk accounts will be found at the conclusion of this chapter. From the amount of milk produced and the amount sold, either as milk or butterfat, a computation can be made as to the value of the amount used on the farm.

The keeping of farm accounts may be done in a very inefficient way at first, but in the progress of recording some features of his business a farmer will realize how valuable these records are, and out of this experience will evolve a more complete system of accounting that will be found to be invaluable.

The Cost of Keeping Cows

A simple method of computing the cost of keeping your cows should be arrived at. Cows vary a great deal, both as to their appetite and the disposition of their feed, and the only exact plan of picking out the profitable ones is by calculating the value of the feed consumed by each cow and the value of the milk she produces. Exact accounts of this kind will come later in your farm management arrangements, but at first a good plan is to feed all the cows an equal ration, and to compute the value of the milk of each cow, both as to quantity and richness in butterfat. This will enable you to select the profitable ones with reasonable certainty.



Spraying Potatoes in Ontario

Value of Feed Consumed Computations have been made of the cost of feeding a dairy cow for a year by the Dominion Experimental Farms, but, as this authority points out, a good deal depends upon circumstances. If a farmer is feeding for Winter production of milk, the cost will be much higher than if his cows are dry in Winter and give most of their milk on Summer pasture.

It might be well to observe here that the cheapest livestock production of any kind that a farmer can have is made upon pasture where the animals seek their own food and thus save expensive labor costs. When feed has to be harvested, threshed, ground and fed, it is much more expensive than when it has only to be grown.

Pasture costs, on the other hand, vary according to the quality of the feed the field contains. Thin pastures that are more or less unpalatable, and which lack nutritious grasses, are never profitable. This is a waste of land and will add greatly to the cost of your cattle's keep. Milk can be produced cheaper in Summer than in Winter, but the relative cheapness of its production will depend upon the quality of your pasture.

The average cost of keeping a cow for one year, with grain and concentrates at about \$25.00 per ton, will amount to about \$80.00. This will be where cows are fed for fairly high production. In the case of feeding for records the cost would run much higher.

How To Keep Accounts Keeping accurate accounts of your cows' feed need not entail a great deal of labor.

If you are having feed ground, or grinding it at home, each time you have a grist done you can make a reasonable calculation of the quantity, and charge it up to the cows and credit the same amount to your crop account.

A calculation, accurate enough for your purpose, can be made of the hay, or other fodder, consumed. Ensilage can be calculated by the number of feet in depth in the silo, and the ratio at which you are feeding it to all your stock. Forms are here shown for keeping accounts of your cattle.

Beef Cattle Accounts The accounts for beef cattle can be kept in the same manner as those for dairy cattle, except that the receipts will be for cattle marketed instead of for dairy produce. The sale of breeding animals, either pure bred or grade, will be entered in the same manner for both. They can be kept as cattle accounts, whether they be of the beef or dairy breeds.



Highland Stirls being driven to market through the streets of Stirling, Scotland.

Dairy Produce Accounts If you are milking a number of cows and marketing a reasonable amount of cream and milk, it is well to keep a separate account for dairy produce. A form is therefore appended for this purpose. When dairying becomes an important part of your farm income it is necessary to keep a close accounting of this phase of your farming.

Hog and Sheep Accounts There need be no material difference in keeping the accounts of hogs and sheep. A reasonable record can be kept of the feed consumed. Pasture for sheep has frequently been calculated at 2c per day per animal. Sheep are hard on pasture, as they clip it closely, which has to be taken into account.

Pasture for hogs will be easily calculated by charging against them the value each acre of pasture would have produced if used that year for the growing of grain. This could be computed from the value of other grain crops grown that year.

Horse Accounts The cost of feed for horses will be easily calculated, as their grain ration is usually measured in gallons, and you know each month how regularly you have been feeding grain.

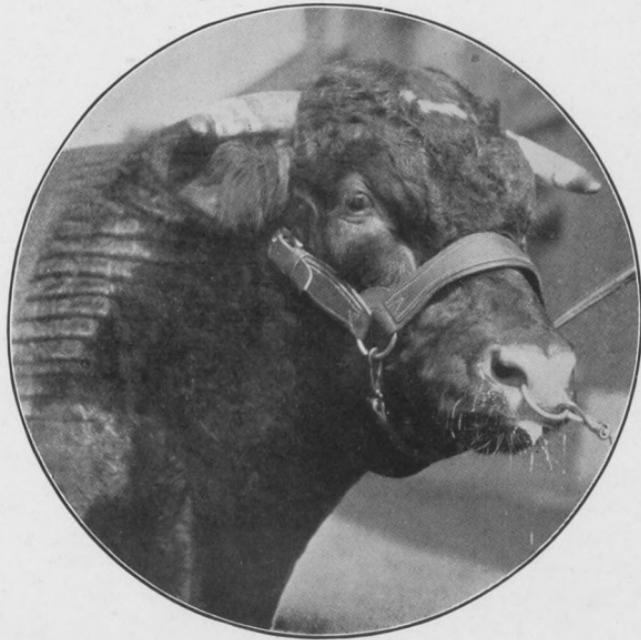
Horses should be credited with from 80c to \$1.00 for each day's work they perform on the land. If a careful account of the cost of keeping horses was recorded, it might lead to a reduction in the number kept on some farms. This might add to the profit of farming by the best and most effective method—reduction in costs.

How To Begin If you have not been keeping farm accounts, begin the first year upon a cash basis. That is, keeping a record of the cash paid out and the cash received. It might be well to undertake cost accounting on one or two lines, such as poultry and hogs, or perhaps dairy cows. Keep these cost accounts in a separate book, and in your own way, until you work out some plan of computing costs for your farm.

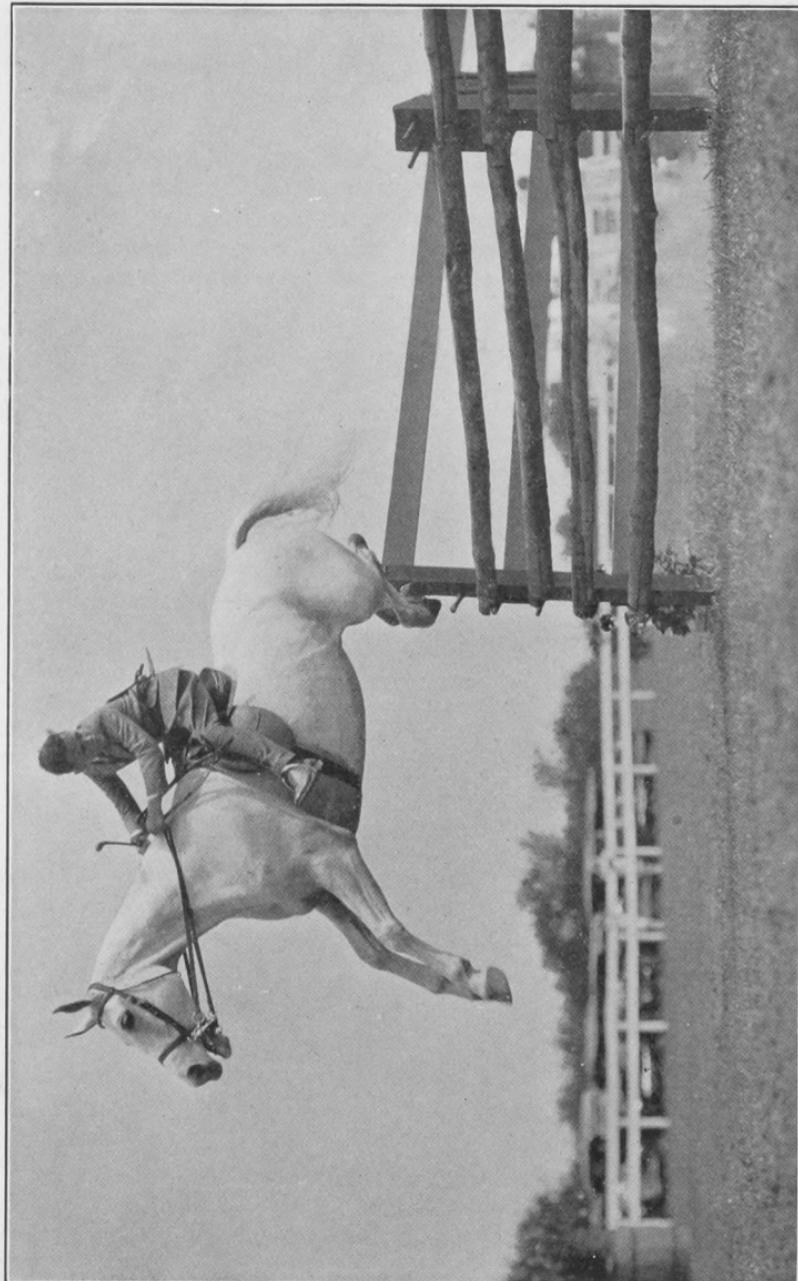
If you are not an accountant and do not have a good deal of leisure, any elaborate system of labor costs in working land or in feeding livestock will prove difficult at first.

The appended forms will afford a simple plan for taking an inventory, recording your egg and milk production, keep-

ing accounts of your revenue and expenditures in the different lines of your farming operations, and, finally, balancing up your business for the year in such a way as to show you exactly what your general results were, and it will also likely indicate to you the features of your farming operations that require close following up, and perhaps a careful accounting of costs, so you may decide whether to try to improve it, or abandon it for something more profitable.



Dominator, owned and used as herd sire by T. A. Russell, Toronto. A good show and breeding bull. This is a typical Shorthorn head. Character, masculinity, nice, flat, well-shaped horns, and big muzzle



Goblets, ridden by Douglas Cleland, of Troy, Ontario, at the 1930 Rochester, N.Y., Horse Show, winning the open performance; winner also of Child's Hunter Class, Royal Winter Fair, Toronto, 1929 and 1930.

—Photo by Haas, New York.

INVENTORY 1930

ITEM	BEGINNING OF YEAR			END OF YEAR		
	Units	Value	Total Value	Units	Value	Total Value
Cand	640	\$300	200 00			
Horses	12	\$80	960 00			
Cattle	25	\$15	2875 00			
Hogs	31	\$14	434 00			
Sheep	20	\$9	180 00			
Tractor	1	\$760	760 00			
Birders	2	160	320 00			

EGGS PRODUCED EACH DAY

Hens	<u>87</u>					
Date	Jan.	Feb.	Mar.	Apr.	May	June
1	<u>48</u>					
2	<u>43</u>					
3	<u>42</u>					
4	<u>51</u>					
5	<u>45</u>					
6	<u>48</u>					
7	<u>47</u>					
8	<u>54</u>					
9	<u>43</u>					
10	<u>42</u>					
11	<u>56</u>					
12	<u>41</u>					
13	<u>46</u>					
14	<u>44</u>					
15	<u>41</u>					
16	<u>42</u>					
17	<u>45</u>					
18	<u>40</u>					
19	<u>44</u>					
20	<u>50</u>					
21	<u>39</u>					
22	<u>43</u>					
23	<u>46</u>					
24	<u>44</u>					
25	<u>48</u>					
26	<u>42</u>					
27	<u>51</u>					
28	<u>46</u>					
29	<u>43</u>					
30	<u>45</u>					
31	<u>48</u>					
Total	<u>1407</u>					
Av. Pe Hen	<u>16</u>					

Total Eggs for Year.....

General Remarks:

(Note: Individual hen daily trap nest laying record sheets, loose leaf, at small cost.

----- Hens in Flock (average)

MILK PRODUCTION EACH DAY

Cows	12					
Date	Jan.	Feb.	Mar.	Apr.	May	June
1	421					
2	426					
3	416					
4	430					
5	417					
6	425					
7	432					
8	414					
9	410					
10	416					
11	423					
12	431					
13	428					
14	427					
15	430					
16	426					
17	421					
18	417					
19	415					
20	406					
21	410					
22	405					
23	398					
24	409					
25	415					
26	420					
27	421					
28	413					
29	409					
30	413					
31	418					
Total	13062					
Av. Per Cow	10882					

..... Cows in Herd (average milking)

Total Milk for Year

(Note: Individual cow daily milk record sheets, loose leaf, available at small cost.

Milk (lbs.) per Cow (average).....

General Remarks: _____

POULTRY AND EGGS

DAIRY PRODUCE

Date	ITEM	Expense	Amount of Income
1920			
Jan 31	12040 lbs. milk at 2 ²²	301 00	
Jan 31	Drawing milk	33 40	
Feb 28	8000 lbs milk at 2 ²²	200 00	
Feb 28	Cream Sold	83 00	
Feb 28	Drawing milk & cream	21 00	

CATTLE

Date	ITEM	Expense	Amount of Income
1930			
Jan 16	Bought one ton oil cake	27 00	
Jan 16	Bought one ton Bran	24 00	
Mar 21	Sold two bull calves \$190.340	530 00	
Mar 28	Sold one fat cow	63 50	
July 31	Recd. prize money	218 00	

HOGS

SHEEP AND WOOL

Date	ITEM	Amount of	
		Expense	Income
1930			
Jan 14	Bought 5 ton Bran	12 00	
May 13	Sold 21 ¹ / ₂ lbs. Wool @ 16 ¹ / ₂		34 72
July 29	Sold 27 lambs @ \$9 ¹ / ₂		26 7 30

HORSES

Date	ITEM	Expense	Amount of Income
1/9/30			
Jan 14	Bought 1 ton Bran	24 00	
Mar 19	Sold one horse (grey mare)	95 00	
June 17	Team working on roads		
	8 days at \$5 per day	40 00	
July 31	Ridg Dr. Moore Veterinary acct.	19 50	

GRAIN

Date	ITEM	Expense	Amount of Income
1930			
Jan 15	Sold 200 bu. Seed wheat @ 15¢		300 00
Feb. 6	Sold 315 bu. seed oats @ 60¢		189 00
Mar 18	Bought 50 bu. Seed Barley @ 9¢	45 00	

MISCELLANEOUS CROPS

Date	ITEM	Amount of Expense	Income
1930			
Jan 21	Bought 280 lbs. Alfalfa Seed	56.00	
Jan 21	Bought Timothy Seed	10.00	
Aug 27	Sold six tons Alfalfa @ \$10		60.00

LABOR

Date	ITEM	Expense	Amount of Total for Month
19.30			
June 31	John Brown / month	25.00	
" 31	James Ashton part of month	14.00	39.00

FARM REPAIRS

Date	ITEM	Expense	Amount of Total for Month
Jan 15	Lumber & Fix Barn	73.00	
Jan 29	Carpenter working on Barn	26.00	
Jan 29	Paid acct. for rails	1.80	
	Total for Jan	100.80	

AUTO, TRUCK, AND TRACTOR OPERATING EXPENSE AND INCOME ACCOUNT

Date	ITEM	Amount of	Enter Total for Month Here	
			Expense	Income
1930				
Apr 4	Fuel oil 21.00	6.00 for tractor	27.00	
Apr 15	Tractor work for W. Jones		14.00	
Apr 22	Truck trip gas & pay		7.00	
Apr 22	Fees and oil for tractor	4.75		
	Total job of oil			
			31.75	21.00

FARM MACHINERY EQUIPMENT AND REPAIRS

Date	ITEM	Expense	Amount of Income
1930			
Feb 12	Repairs for Drill	4 65	
Feb 18	Repairs to Harness	11 40	
" 18	Harness oil	1 50	
Mar. 26	Sold old walking plow	15 00	
Apr 14	Bought plow	2 15 00	

OTHER ACCOUNTS

SUMMARY OF RECEIPTS AND DISBURSEMENTS

ITEMS	Month of	
	Expense	Income
Farm Repairs	215 00	
Fertilizers	92 00	
Autos, Trucks and Tractors Operating Account	340 00	260 00
Machinery Equipment and Repairs	281 50	
Labor	654 00	
Veterinary	31 00	
Feed—Concentrates	115 00	
Seeds	65 00	
Horses	30 00	185 00
Hogs	57 60	619 45
Cattle	165 00	1915 00
Dairy Produce	306 40	3102 35
Sheep and Wool	62 00	337 42
Poultry and Eggs	31 50	265 50
Corn	8 00	
Wheat		2760 40
Oats		189 00
Beans		
Barley	45 00	
Rye, Flax		
Hay, Straw and Silage		
Fruit and Vegetables		
Rent		
Taxes	260 00	
Interest	180 00	
Insurance	30 00	
Miscellaneous	66 40	115 50
Other Accounts	126 70	215 60
Totals	3162 10	9965 22
Gross Profit or Loss	6803 12	
Grand Totals	\$9965 22	\$9965 22

Profit

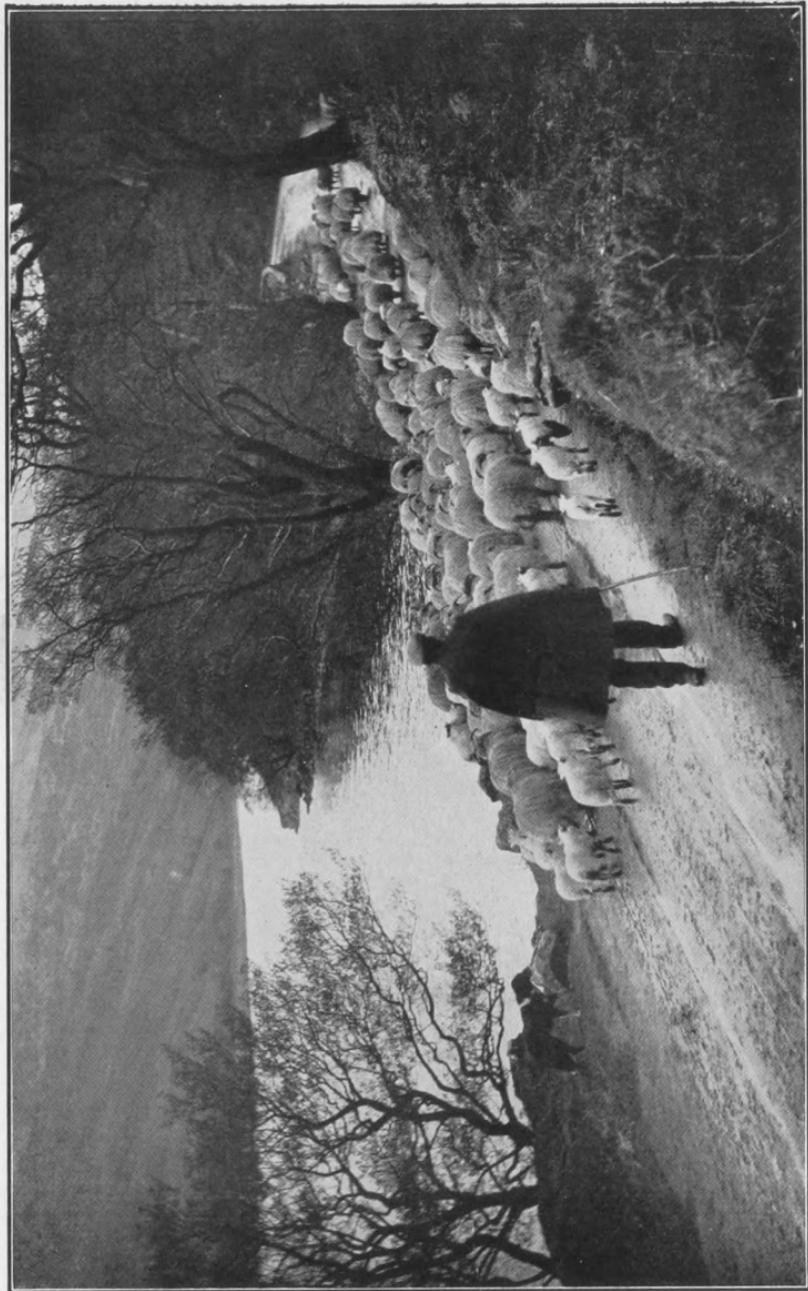
FARM MANAGEMENT

BALANCE SHEET BEGINNING OF YEAR /1930

	Assets	Liabilities
ASSETS:		
Land	12200 00	
Buildings and Fence	7000 00	
Machinery and Equipment Inventory	8100 00	
Livestock, Grain and Supplies Inventory	7600 00	
Cash (on hand or in banks)	1500 00	
Due from Others (Total Receivables):		
Accounts	310 00	
Notes.....		
Mortgages		
LIABILITIES:		
Due to Others (Total Payables):		
Accounts		125 00
Notes.....		
Mortgages		3150 00
Totals	36710 00	3275 00
NET WORTH:		
Net Worth (Difference between total assets and total liabilities)		33435.00
Grand Totals	36,710 00	36,710 00

BALANCE SHEET CLOSE OF YEAR 1930

	Assets	Liabilities
ASSETS:		
Land	12200 00	
Buildings and Fence	6700 00	
Machinery and Equipment Inventory	7400 00	
Livestock, Grain and Supplies Inventory	11430 00	
Cash (on hand or in banks)		
Due from Others (Total Receivables):		
Accounts	410 00	
Notes		
Mortgages		
LIABILITIES:		
Due to Others (Total Payables):		
Accounts		7500
Notes		
Mortgages		2150 00
Totals	38140 00	2225 00
NET WORTH:		
Net Worth (Difference between total assets and total liabilities)		\$35915 00
Grand Totals	\$38140 00	\$38140 00



Scottish shepherd and his flock on the shores of Loch Lubnaig, Scotland

Chapter XV

MARKETING FARM PRODUCTS

THE success of farming depends upon good crops and profitable markets. The farmer's first business is to produce a superior article of food; to succeed he must sell it for a paying price. While diversified farming is recommended as the safest to follow, it is a good plan for a farmer to have some one thing in which he specializes. This is always a good plan for securing extra revenue in the form of a premium over ordinary prices.

Grain Sales If grain forms the largest part of a farmer's business, it is a good plan for him to secure registered seed, not too large a quantity to begin with, sow it on a clean field and raise registered seed for sale.

It is also wise to make a connection with some reliable seed house, where such seed grain may be disposed of at fair prices. Sales are sometimes arranged through provincial seed fairs, but the grower should have some definite arrangement made whereby he is fairly sure of a sale. Small quantities may be sold to neighbors, but for any considerable amount this is not a very good outlet.

In the marketing of commercial grain a man must decide whether he shall market privately or join some co-operative marketing association. Joining such an organization saves a farmer some trouble in deciding what market to sell on, and should give him the average profit on his grain. It will be, like any other business organization, dependent for its success upon its management.

We are not going into the arguments *pro* and *con* about this matter. A farmer with intelligence enough to succeed in his business will be quite capable of deciding for himself.

Cattle Markets A breeder of pure-bred cattle, particularly of the beef breeds, will be well advised to sell his bulls in one of the auction sales that are arranged for this purpose. When selling bulls in such a sale be sure to have them fitted to show to best advantage.

If bulls are well brought out at such a sale, they will pay well for the extra feed. We all know the old story of the purchaser wanting a bull not too highly fitted—just in ordinary condition. He may state this as his desire, but if you show him an animal well fleshed and another in thin condition, there will be no doubt about what he will do. He will pay a much higher price for the animal that fills his eye.

Sell your bulls when they are twelve months old, or younger, if possible. Keeping a lot of almost full-grown bulls in the barns is not a profitable business. It takes a good deal of feed to keep them in condition. When they are over fifteen months they begin to eat their heads off, and they require more attention and more room than other cattle.

Judicious advertising in farm papers, and exhibiting at shows helps to sell good cattle. Females can also be sold to advantage by auction. If you are entering cattle in an auction sale, be sure to have good ones. If you use this as a method of disposing of your tail-enders, it will be bad advertising for you.

Cattle For Beef If you have a few good cattle on feed, you will usually have buyers enough. The best cattle are always sought after. If you belong to a co-operative cattle marketing organization, try to establish the reputation of sending forward the best finished cattle. There is always a good price for tops.

Whether you are marketing your own cattle or selling through an organization, keep yourself well informed on market conditions. Study markets and demands, so you will be in a position to know exactly what you should get.

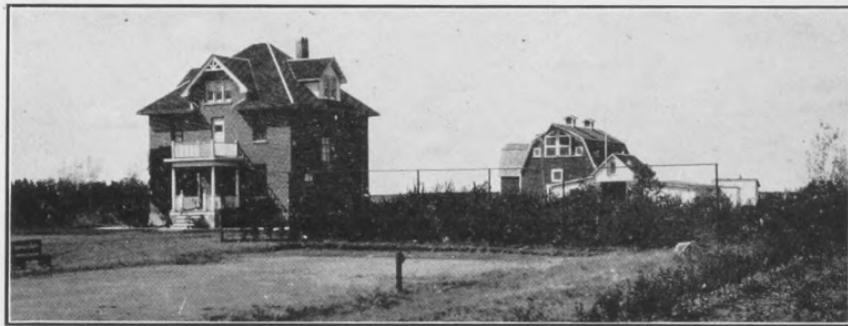
I have often noticed that a shrewd, successful farmer can always give you market quotations at any time you question him. It is because he knows the markets that he is successful.

If you are feeding a fairly large number of cattle, sort up the tops as soon as they are ready, and sell them on the first strong market. You can give better attention to what is left, and this gives you two chances to hit the high price.

When to Market It is difficult to determine any set time to market the products of the farm. When any product is finished, if the market is reasonably good, it will be a good plan to sell it. Storing is always attended with the danger of loss or shrinkage, and it often costs money for extra moving. There are some things which will deteriorate if kept on hand. They should not be stored.

Prompt selling is usually the best method. When the crop or livestock is ready, if you dispose of it at once you have the money to use in some profitable way.

The farmer must always be doing business. He is just as likely to make some money on his turnover as on what he grows. Prepare your goods for market and offer them in the best condition you can; sell quickly and take up some other line of your operations, to which you can then give more time. This is not an absolute rule, but it is quite a good guide.



Farm buildings of W. H. Harvey, Flaxcombe, Saskatchewan

Dairy Cattle And Products There is usually a good demand for well-bred dairy cattle with records of performance in their pedigrees. Veal the bull calves that are not bred to make outstanding sires; keep only your best, and establish a reputation for selling only young bulls that are bred to improve the herds they go into.

The auction ring is a good plan for selling pure-bred dairy cattle. In fact, it is the method largely adopted in every country now for the disposal of pedigree stock.

If you are marketing whole milk in a city, you should make connection with a good milk producers' organization. Milk is a perishable product and one you are apt at times to have a surplus of. These are two good reasons why farmers who produce milk, and sell it to distributors in large cities, should act together for their mutual protection. Surplus milk is apt to be almost a dead loss, and the producers should guard themselves against such consequences.

Selling milk to a cheese factory, or cream to a creamery, are entirely different propositions, and are not fraught with the same dangers. The first thing for a dairy farmer to consider is where, how, and at what price is he going to be able to dispose of his milk products. This is the only basis upon which he can calculate whether or not such a business will yield him a profit commensurate with the investment and the labor.

Packing For Sale The package has often sold the product, and the packing, if properly done, will frequently bring the customer back for a further supply. If a farmer has fifty turkeys to market, he can add five cents a pound to their value, by starving them properly, killing them correctly, dry-picking cleanly, and shaping and packing them so they will come out of the cases in their most attractive form.

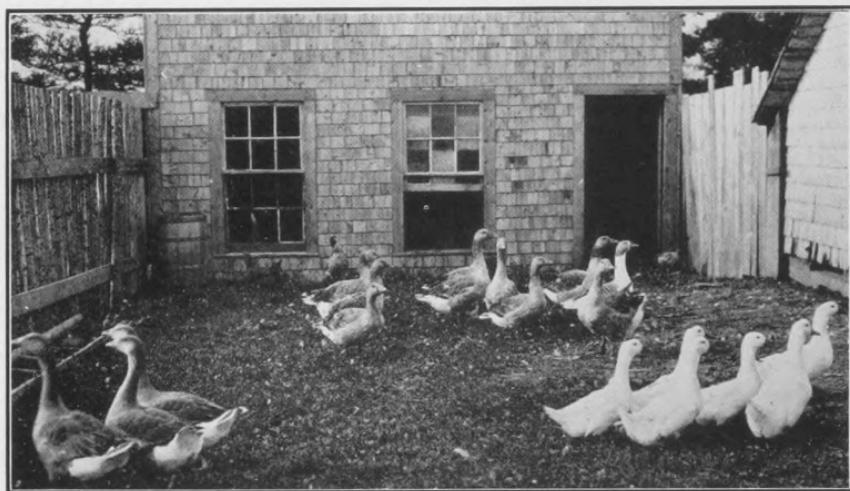
Well-fattened turkeys put up in this way will get a repeat order from the purchaser each year, and what has been said of turkeys is equally true respecting other kinds of poultry.

**Packing Eggs
And Fruit**

Fruit growing is not being dealt with in these publications only, as it forms a part of a mixed farming plan. Careful packing in fruit is essential to ready sale, and freshness is all-important; marketing berries immediately they are picked is a plan that pays. The purchaser is always pleased to find the same class of fruit throughout the package as is displayed in the top layer. This is a good, honest method to follow, and one that can be depended upon for popularity.

Eggs are only good when fresh. The grading of eggs has worked wonders in popularizing this food throughout Canada. One stale egg has often destroyed an appetite for several dozen, and so spoiled the customer's taste and the producer's market.

Fresh extras have a fine flavor and are the world's best breakfast food. Care in collecting will save the producer a lot of trouble in grading. It should be a great comfort to a farmer to know that his eggs are dependable, and he should always keep in mind the amount of grief one bad egg may cause.



Geese and ducks on Dominion Experimental Farm, Charlottetown, P.E.I.

World Markets Canadian farmers should keep in touch with world markets, as this country is likely to furnish a surplus of farm products for export for many years to come. The markets which can be found for this surplus are, therefore, of considerable consequence to farmers in Canada. A knowledge of the world demand for our exports can be some guide to the farmer in his production.

Farmers should not, however, be too much impressed by periodical depressions in prices of any one thing they have to market. Markets move up and down very quickly at times. A surplus of some product appears on the horizon and prices slump, but there is a law of averages that causes a short crop, and prices go back to a reasonable level. When prices are abnormally high is a good time to dispose of all your surplus, and, in the case of livestock, to sell as bare as possible, as inevitably these prices will fall.

It is never a good rule to abandon some line of farming because of low prices. You may reduce your operations in that line, but hold yourself in readiness to re-enter, so you can profit quickly when the prices come back. Reduce operating expenses to a minimum under low-price conditions, but carry on for the prospects of the future.

The world markets are demanding quality today in the food they are purchasing. The grading of Canadian cheese has given it a place in the British market that is all its own. Standard products of maintained quality will always command good prices and ready sale. The best is none too good to sell, and always brings the most profitable returns.

Graded farm products of high quality, presented to the world's market in the best possible form, will help to solve the farmer's marketing problems. Canada needs to establish brands for her foodstuffs that shall be a standard of perfection for the consumer.

Chapter XVI

MAINTAIN SOIL FERTILITY

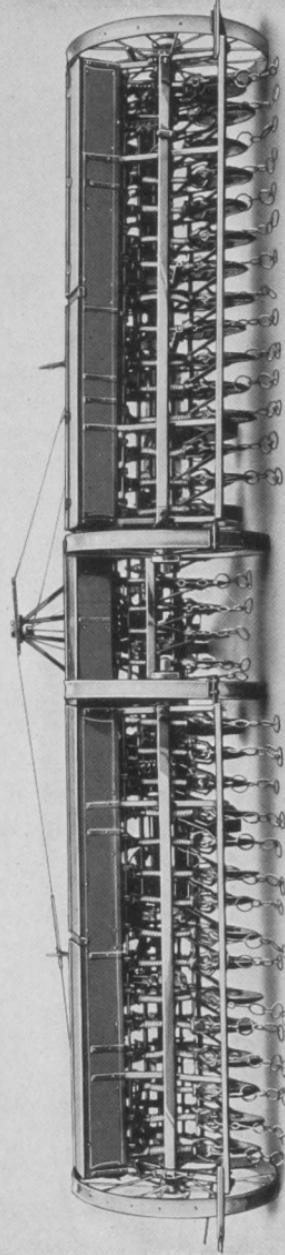
THE profits of a farm depend to a great extent upon the yield per acre of its crops. Whether these crops be sold for cash or fed to livestock, an increased quantity from every acre will swell the receipts of the farm. Low crop yields make an important reduction in the farmer's income. Every additional bushel per acre he can add to his yield improves his business.

There are two things that largely govern the crop yields of land, namely, the fertility of the soil and proper cultivation. Land can only be brought to a satisfactory condition of tilth when it is rich in plant food and is carefully cultivated.

Plant Food It frequently takes farmers, who have been accustomed to tilling virgin soil, a good while to realize that their land is becoming depleted of its essential plant food. Years pass quickly, and we fail to appreciate the extent to which we have reduced the fertility of our land.

A well-planned rotation of crops that includes clovers and other legumes will greatly aid in keeping land in good condition for growing crops. The application of quantities of barnyard manure is very beneficial in restoring fertility. Soil can be maintained in good, vigorous condition by liberal applications of this very excellent fertilizer.

It is usually impossible to have a sufficient supply of barnyard litter to keep a farm up to the highest point of production. In such cases commercial fertilizers can be used both successfully and profitably. In many cases barnyard manure is apt to be deficient in phosphate, and the addition of superphosphate fertilizer will improve results. Farm manure, if liberally used, is apt to promote an excess of straw in crops, and the addition of superphosphate will



A 35-run drill carrying fertilizer box, made specially for applying fertilizer on the prairies

greatly aid in filling the heads with good, plump kernels. This not only increases the yield, but improves the quality of the grain.

Testing Soil Every farmer should make soil tests in the different fields on his farm. This is the only positive method by which you can be certain of what you are doing. Tests for acidity can be made very simply. Any agricultural college will provide farmers with the means for making such tests, and the veriest amateurs can make them.

Tests for the quantities of available plant food in the soil are not so simple. The daily, and even hourly, variations in the nitrate content of soils renders the results of any test of very little value. The application of nitrates to a small part of a field will determine, as compared with the part not treated, whether or not the soil is deficient in this ingredient. Plowing down legumes will rapidly restore such a deficiency, or nitrates may be applied as commercial fertilizer.

The Dominion Chemist, of the Experimental Farms, informs us that a method of estimating the approximate amount of available phosphoric acid has been worked out by Professor Truog, University of Wisconsin. The outfit for field use is put on the market by the La Motte Chemical Products Company, McCormick Building, Baltimore, Md., and the price is \$12.50. We have had no experience with this method, and cannot speak as to its reliability in indicating phosphoric acid deficiency, but the test is said to be simple and practical.

The first deficiency in plant food in your land is likely to be a lack of phosphates. A good plan, however, is to do a little experimenting with fertilizers on your own account, and let the results be your guide.

Lime For Acidity Land that has too much acidity will not grow alfalfa or sweet clover well. Alfalfa may refuse to grow at all on acid soil. The cure for acid soils is the very simple application of lime, which can be

secured at a low price, and will give the farmer greater returns in proportion to the expenditure than he can receive from almost any other treatment of his soil.

Land should not be allowed to become deficient in lime. Great care should be taken to test every field in several places for acidity, and wherever the strongest reaction takes place the heaviest applications of lime should be made. If you are going to apply commercial fertilizers, it is very important to sweeten your soil first, if it is at all acid.



Setting out tobacco plants in Essex County, Ontario

Phosphates Required In most sections of our farming districts the first deficiency in plant food, to be found in the land, will be a lack of phosphate. We frequently grow legumes, by which nitrogen is restored, and potash is not so quickly exhausted, so the rule is that our first depletion will be that of phosphate.

Build Up Your Land An efficient farmer will prepare a good seed bed before he plants his grain. He will also sow nothing but the best of seed, knowing as he does that good crops do not grow from inferior seed. His ultimate yield will then depend upon the fertility of his soil, excepting, of course, exceptional weather conditions. If the soil is rich in available plant food, the crop will be an abundant one; if the land is deficient in the elements that promote growth, poor results may follow.

The question then becomes the very pertinent one of why a farmer will expend all the labor necessary to produce a good crop, if his soil is not rich enough to give him a good yield. If the soil is rich, the same labor will produce a crop worth a good deal more money. The answer, then, is that we must see to it that the land is enriched to yield a heavy crop.

We must first find out what the soil lacks, then we can supply that need. Increased yields mean increased profits. We cannot afford to be tilling impoverished soil, where the returns will not sufficiently compensate for the labor expended.

Run-Down Farms People frequently speak of a farm as being "run down." The same expression is often used with reference to a person in poor health. The expression is a significant one, meaning, as it does, exhausted vitality. When persons are in this physical condition, they must make an effort to build up their health again, to restore their vitality, so they will be able to perform their regular duties. No one can do a full, vigorous day's work when in a run-down condition.

Soil in a run-down condition cannot meet the demands of a full crop. It lacks the vitality to sustain the growth necessary to a heavy yield of grain. Crop returns depend upon moisture, sunshine, and plant food in the land. Without the plant food, however, the moisture and sunshine are helpless. Growing crops can be greatly aided by careful



*Brush cutter, built on a tractor, for clearing poplar and willow brush on the prairies,
at work near Botha, Alberta*

preparation of the seed bed, and later cultivation when necessary, but no full yield can be secured unless the soil contains sufficient quantities of available plant food to promote rapid growth, early maturity, and full heads of grain.

Fertilizer Required It is, therefore, essential that we keep our soil up to a state of high production. In every agricultural country in the world where uniformly heavy yields of grain are harvested, we find commercial fertilizers are freely used. The British farmer has been constantly feeding his soil for generations. The older provinces in Canada have been gradually realizing the value of stimulating their land by supplying it with plant food, and so making more profitable crops possible.

The western prairies, rich in decayed vegetable matter, have in many parts of these provinces produced remarkable crops over a considerable period of years, but farmers on these prairies are now discovering that where land has been cropped for fifteen or twenty years the soil needs some restoration, and experiments with commercial fertilizers are proving that their application will improve the yields of grain and increase the profits of the farmer.

Alfalfa And Lime It would appear from tests made in fields that have been growing alfalfa that this plant exhausts the lime content of the soil. It is quite apparent that alfalfa will not flourish on land that lacks in lime. It is easily deduced, then, that lime is a nourishing factor in the life of alfalfa, and tests that have been made of heavy land that has been growing alfalfa for some time shows a lack of lime content and a resultant acidity.

This is a feature of fertilizing land that should be observed closely. Alfalfa may be considered the most valuable plant in farming operations. It is excellent feed for all

kinds of livestock, and it enriches the soil by restoring nitrogen. Many farms have been greatly improved by growing alfalfa. If it exhausts the lime content, however, that must be given some attention, and as it can be restored cheaply, it should neither be neglected nor delayed. Soil can only be kept in good condition for growing this legume by keeping it sweet. Farmers should, therefore, not allow acidity of their soil by the exhaustion of lime to persist. It should be immediately remedied.

Increase Yields Low yields in either your land or your animals is fatal to farming. The low-producing cow in the dairy is living off the good ones and often she is a real liability. Every acre of your land that is unable to produce its maximum yield of grain is eating into your farm profits.

No form of animal or vegetable life can exist without phosphorus. It is one of the essentials of life. The land produces the vegetable crops to feed your animals; how essential, then, it becomes to see that your soil does not lack in phosphates.

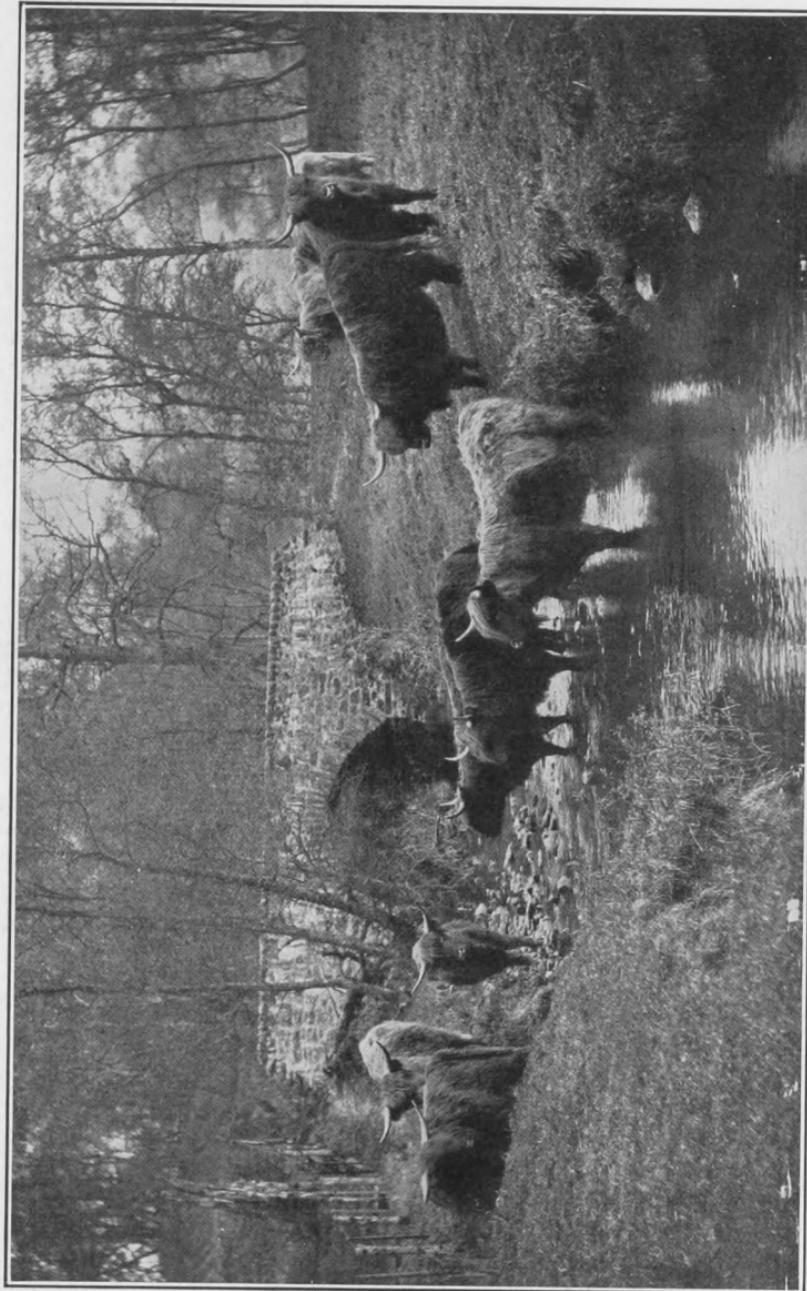
Must Use Seed Drill Commercial fertilizer gives the best results when sown by a fertilizer drill at the same time as the seed grain is sown. The work is, therefore, all performed with one operation, and the plant food is placed close to the seeds, and it will stimulate their growth as soon as they sprout and begin to send out their first rootlets. Nothing is more important than rapid, vigorous growth in the early stages of plant life.

Results of Experiments During the last three years, experiments with commercial fertilizers have been carried on in the prairie provinces. The Dominion Experimental Farms and the Provincial Colleges of Agriculture have collaborated with industrial companies in this work, and the results have clearly demonstrated that where

soil has been partly worn out by continuous cropping, over a period of years, that it can be quickly restored to the production of heavier yields of grain by the application of commercial fertilizer.

In these experiments—a comparison between the fertilized and unfertilized plots—the fertilized plots have uniformly shown:

1. A more rapid growth after the grain was sown, thus resulting in earlier maturity, the crowding out of weeds by the vigorous grain plants, and the rapid formation of a thick mat of green leaves over the field, which prevented the evaporation of soil moisture. Also a rapid root growth at the beginning of the plant life, which anchors the growing grain in the soil and retards drifting and blowing out of crops.
2. The filling of the heads with good, plump kernels, thus increasing yields per acre by from ten bushels up as high as 25 bushels. These increased yields had no additional cost for cultivation and were obtained at a moderate cost for fertilizer.
3. Earlier ripening by from five to ten days, which, in 1930, enabled the crop to be harvested early enough to escape a snow-storm that reduced the grade of later yields and added harvest difficulties, which greatly increased the cost of the crop. Rapid growth and early maturity reduces the dangers from rust.



Highland cattle in Glenbuckie, Perthshire, Scotland

Chapter XVII

CUTTING COSTS

REDUCING costs of production is the farmer's most pressing problem at the moment. Prices for the produce he has to market have fallen, and if he is to have any return for his own work and capital invested, he must reduce the price of production.

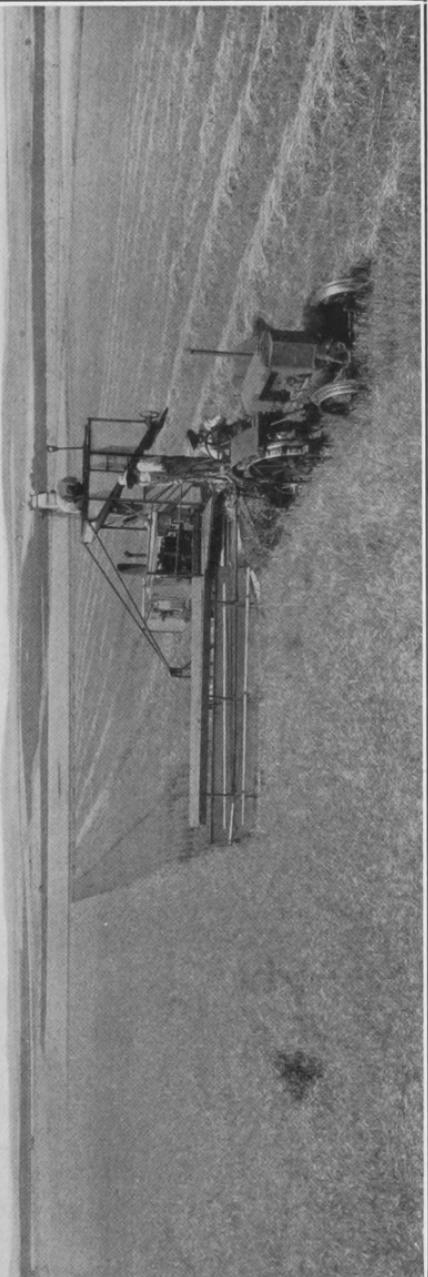
Labor Costs The outlay for labor on the smaller farms in Canada is not very large. Wages for farm workers during the last few years have not been unduly high, and any reduction in what is paid to hired help on a farm cannot greatly affect the results. The reduction of farm wages is, therefore, not a very effective method of cutting costs.

Getting Greater Results The way must rather be found by increasing the productive power of each man working on the farm. Either by the use of larger outfits, bigger machinery and greater power, it must be made possible for one man to produce two bushels of wheat where he only produced one before.

The cost of seeding, harvesting and threshing has been the large expenditures on farms. In the wheat districts of the West the threshing bills, for a few years, grew at an amazing pace, and together with the cost of harvesting, ate up the growers' profits.

The Combine Harvester Some of these problems are being solved by the combine harvester. A farmer must guard against buying a machine that is too expensive for the size of his farm. During 1930 a great deal of custom work was done for small farmers, with combines owned by larger operators; and it proved an inexpensive way for the farmer to harvest, and a profitable business for the owner of the combine.

Cutting Costs on an Alberta prairie farm



The charges for this service varied with the districts and the condition of the crop. In one place, \$3.50 per acre was charged, which is excessive. While as low as \$2.00 per acre was charged in other districts.

A Large Saving James Miller, of Carman, Manitoba, purchased a combine last harvest. Conditions were almost perfect for its use. He had 700 acres of grain to cut, 300 acres of wheat and 400 acres of barley. He had a 12-foot swather and a 10-foot combine, with an 8-foot pick-up. He swathed practically all his grain.

Mr. Miller operated the swather with horses, cutting 40 acres per day, for which he paid a man \$3.00 per day to drive the swather. He said the feed for the horses cost about \$1.00 per day, so that he cut his grain with the swather for 10c per acre. This is hardly a fair estimate, however. The cost should be calculated at \$3.00 per day for the man and \$4.00 per day for the four-horse team, which is about the cost per day's work of horses on a farm. Forty acres would then cost \$7.00 to swath, or 17½c per acre.

In operating the pick-up and thresher he paid two men each \$3.00 per day for 20½ days, amounting to \$123.00. He used 16 barrels of gas at 22c per gallon, and 20 gallons oil at \$1.00 per gallon. He and a boy drew the grain to the elevator, which was close by. The cost of cutting and threshing the 700 acres was:

2 Men 20½ days at \$3.00	\$123.00
800 Gallons gas at 22c	176.00
20 Gallons oil	20.00
Cost of swathing	122.50
Depreciation on tractor	50.00
Hauling grain at \$6.00 per day	123.00
	<hr/>
	\$614.50

This would work out to about 88c per acre. He threshed 7,500 bushels of wheat from the 300 acres, and 8,500 bushels of barley from the 400 acres, or 16,000 bushels in all, conse-

quently, the cost for cutting and threshing the 16,000 bushels of grain was just under 4c per bushel.

Comparing this with the cost of handling the crop with the binder and threshing machine, Mr. Miller made the following computation:

Man and 4-horse team with binder, 35 days	
at \$7.00 per day	\$ 245.00
Stooking	105.00
Twine	350.00
Stook threshing, 8,500 bushels barley at 7c	595.00
Stook threshing, 7,500 bushels wheat at 10c	750.00

	\$2,045.00

This would work out at \$2.90 per acre, or 12 $\frac{3}{4}$ c per bushel. The old way would have cost over three times as much, or \$1,430.50 more, which was about three-fifths of the cost of the combine the first year.

The tragedy of the whole matter was, however, that this year it would have taken 4,000 bushels of wheat, or nearly 20,000 bushels of barley, to pay for a combine. The money saved on harvesting and threshing was badly needed this year.

Saves Short Crop D. N. McIntyre, of Meadows, Manitoba, said that the short crops this year could not have been all saved but for the use of the combine. He saw fields where binders failed to gather the crop, as it was too short to elevate to the knotter, but the combine picked it up and threshed it.

Mr. McIntyre used his engine to draw the swather; and paying men \$5.00 per day, with gas at 21 $\frac{1}{2}$ c and oil at 92c, it cost him \$1.01 $\frac{1}{2}$ per acre to cut and thresh his grain. This did not pay for drawing it from the machine. He is of the opinion that a farmer should be operating two sections before he purchases a combine. When the ground is firm, Mr. McIntyre is quite convinced from experience that his 15-30 tractor will do as much work as fifteen horses. He

would not abandon the horses entirely, but for speeding up work and reducing costs he believes in the efficiency of the tractor. He also believes in cows, and milks about 25, which he regards as his security in farming.

Additional Evidence The opinion that the combine harvester will save a light, short crop in a quite remarkable way is upheld by D. C. Ohlen, of Ohatan, Alberta. He claims that in a field in which the binder was saving only five bushels to the acre, the combine saved 10 to 12 bushels.

This opinion is also upheld by Carl Omath, of Ohatan. J. W. Blakley, of Ryley, Alberta, and W. J. Kallal, of Tofield, also agree with this opinion. It is in the saving of



Driving four miles to school on the prairies with "White Spot" and "White Sox."

harvesting costs, however, that these men see the real value of the combine.

Cultivating Costs Mr. C. S. Noble, of Nobleford, Alberta, one of the largest and most efficient operators of land in that province, states that his summerfallowing costs in 1930 ran about 90c per acre. With plans to operate larger equipment in 1931, he hopes to summerfallow 4,800 acres and bring the cost under 65c per acre. This is operating upon a very large scale. Mr. Noble has a mammoth combine, and is endeavoring to cut the costs of producing wheat to about 35c per bushel. The yield will have a good deal to do with the results.

Employment Year-Around I was talking to a large wheat farmer recently who informed me that he was going into hogs in order to give his men useful and productive employment during the whole year. He pointed out also that it would give him another outlet for his grain, but he did not regard that of as much importance as the yearly employment of men whose work would be increasing the farm's income.

This is highly important on every farm. If costs are to be cut, the man who draws a yearly wage must be engaged in productive employment continually. If he is not working steadily, his idle time must be charged up against his production when busy, and so increase its cost.

Eliminate Waste Unprofitable livestock must be weeded out. Feeding animals that are low producers in beef, milk, or pork is a losing game. Waste land must be reclaimed, and impoverished land fertilized to double its yield. Tilling soil for half a crop is piling up costs of production. More grain from fewer acres tilled, larger quantities of milk from a smaller number of cows to feed, and beef at a reduced cost from animals easily fleshed —these are some of the means by which the farmer's costs must be cut.

Size of Farms The size of a farm has something to do with the cost of its operation. It takes the same investment in implements to work a farm of 100 acres as a farm of 150 or 200 acres. The cost of implements is overhead, and on the small farm it is apt to be too great. In Western Canada it requires as many implements for a quarter section as for a half section. These are problems to solve.

We are by no means advising that the man with a small farm should increase his holdings so as to reduce his overhead, without first carefully considering the advisability of increasing his holdings, and his ability to pay for the purchased land. Where a farmer has boys growing up and able and anxious to work on the land, he may reduce his costs of production if he can acquire more land upon reasonable terms.

The question of hired help enters into this problem also. If a farmer requires an extra hand and yet has not land enough to keep him employed all the time, the engaging of such help will increase his costs.

The leasing of extra land might be a way out of the difficulty. Land can often be secured at a reasonable rental, and it might be a much safer move than buying additional land. We are inclined to fight shy of renting land on this continent, but it has some things to commend it; in fact, it is a rather advantageous way of increasing a farmer's operations when he has the machinery and help to handle a few more acres.

Thoughtfulness Important The amount of work a man accomplishes on his farm is in a great part due to his thoughtfulness, and many of his failures to cut costs can be safely attributed to his thoughtlessness. If a farmer has two binders, one new and working smoothly, the other well worn and apt to give trouble, he will be well advised, if at all possible, to put them to work in different fields, so the new binder may do its full day's work and not be held back by the worn one when it needs adjusting.

If he has a heavy crop, or one difficult to cut, the new binder should be put to work in that field, and the old one assigned to a lighter job.

Knowing what to do next and getting at it quickly always saves costs in accomplishing any work.



Wishaw Queen, Champion at Madison Square Gardens, New York, for Colonel Robert McEwen, of London, Ontario.

*Chapter XVIII***GENERAL INFORMATION**

WE ARE furnishing in this chapter some useful information that farmers may find convenient for reference. It is frequently of advantage to know where to look for the capacity of a silo of certain dimensions, or the composition of satisfactory feed for dairy cows, or livestock statistics, when a discussion is on. This chapter will set forth a few facts upon such matters.

Bushels of Grain in a Bin The general rule for measuring grain in a bin is to allow $1\frac{1}{4}$ cubic feet to a bushel.

Multiply the width in feet, by the length in feet, by the depth of the grain in feet, and divide by $1\frac{1}{4}$. This will give you the number of bushels by measure.

Tons of Hay In a Mow To measure the number of tons of hay in a mow, multiply the length by the width by the depth (all in feet) and divide by 512. If the hay is in the bottom of a mow and grain has been piled on top of it until threshing time, divide by 400, as hay pressed by so much weight will weigh a ton for every 400 cubic feet.

Dairy Cow Ration A balanced ration for cows that are milking is an important feature in their production. A number of mixed feeds have been put upon the market, which are carefully prepared and have given good results. A farmer usually has grain he wishes to feed, and so must plan to add to it the necessary ingredients to give it a proper protein content, and thus make the most of his feed.

It is quite easy to waste feed by using a wrong or unprofitable mixture. No farmer would undertake to get good results from dairy cows by feeding them on an exclusive diet of timothy hay. In some cases mistakes almost as

bad are made. The Dominion Experimental Farms Division of the Federal Department of Agriculture has carefully worked out a series of meal mixtures for feeding dairy cows that have given very satisfactory results, and we are publishing them here for the information of our readers.

Suitable Dairy Cattle Meal Mixtures

1. To be fed with silage or roots and alfalfa hay.

(1)	Lbs.	(2)	Lbs.
Ground oats	300	Ground oats	200
Ground barley	200	St'd recleaned screenings	400
Wheat bran	400	Wheat bran	300
Choice cotton seed meal	100	Oil meal	200
Digestible protein	13.4%	Digestible protein	13.3%
(3)	Lbs.		
Ground oats	400		
Wheat bran	400		
Gluten feed	200		
Digestible protein	13.2%		

2. To be fed with silage or roots and clover hay.

(1)	Lbs.	(2)	Lbs.
Ground barley	300	Ground oats	400
Hominy feed	200	Wheat bran	300
Wheat bran	200	Brewers' grains	200
Corn distillers' grains	200	Linseed meal	100
Linseed meal	100		
Digestible protein	14.1%	Digestible protein	14.9%
(3)	Lbs.		
Ground oats	300		
Ground corn	200		
Bran	300		
Choice cotton seed	200		
Digestible protein	15.5%		

3. To be fed with silage or roots and mixed hay.

(1)	Lbs.	(2)	Lbs.
Ground barley	300	Ground oats	300
Wheat bran	200	Bran distillers' grains.....	300
Gluten feed	300	Choice cotton seed meal	100
Linseed meal	200		

Digestible protein 16.1%

Digestible protein 17.0%

(3)	Lbs.
Ground barley	200
Ground wheat	200
Bran	300
Linseed	200
Cotton seed	100

Digestible protein 17.1%

4. To be fed with silage or roots and timothy or other carbonaceous hay.

(1)	Lbs.	(2)	Lbs.
Ground oats	200	Ground corn	200
Wheat bran	200	Wheat bran	300
Gluten feed	400	Brewers' grains	300
Linseed meal	200	Linseed meal	100
		Cotton seed meal	100

Digestible protein 19.1%

Digestible protein 18.4%

(3)	Lbs.
Wheat bran	200
Distillers' grains	400
Cotton seed meal	100
Linseed meal	100

Digestible protein 18.1%

Provision should be made for a mixing room in every cattle feeding barn. If satisfactory results are to be secured, reasonable care must be taken in the mixing of feed for livestock. Haphazard methods will only produce uncertain results. It is only a properly balanced ration that can be profitably fed to dairy cows. Careful attention to mixing feed will reduce production costs.

The following table will give the capacity in tons of silos of different heights and diameters. There will be very little difference whether the silage is made from green oats, sweet clover or fodder corn.

CAPACITY OF SILOS

INSIDE DIAMETER IN FEET

Height in Feet	10 Tons	12 Tons	14 Tons	16 Tons	18 Tons	20 Tons
20	26	38	51	67	85	105
21	28	40	55	72	91	112
22	30	43	59	77	97	120
23	32	46	63	82	103	128
24	34	49	66	87	110	135
25	36	52	70	90	116	143
26	38	55	74	97	123	152
27	40	58	79	103	130	160
28	42	61	83	108	137	169
29	44	64	87	114	144	178
30	47	67	94	119	151	187
31	49	70	96	125	158	195
32	51	74	100	131	166	205
33	53	77	105	138	173	214
34	56	80	109	143	181	224
35	58	84	114	149	188	232
36	61	87	118	155	196	242
37	63	90	123	161	204	252
38	66	94	128	167	212	262
39	68	97	133	174	221	272
40	70	101	138	180	229	280

Numbers and Value Of Livestock

The Dominion Bureau of Statistics gives the following statement of the numbers and value of livestock and poultry in Canada for the year 1930. The numbers for 1929 are also given (in brackets) for comparison. In the values of different farm animals the 1928 figures are also given.

This 1930 statement calls attention to the fact that the average values of all descriptions of livestock show decreases. The average value per head for Canada is estimated as follows, with the averages for 1929 and 1928 within brackets: Horses \$61 (\$70, \$76); milch cows \$59 (\$74, \$72); other cattle \$35 (\$47, \$46); total cattle \$45 (\$58, \$57); sheep \$7 (\$10, \$10); swine \$15 (\$16, \$15). For swine, per cwt., live weight, the average is \$9, as compared with \$11 in 1929 and \$10 in 1928. The average price of wool per pound is returned as 11 cents per pound for unwashed and 16 cents for washed, as against 21 cents and 27 cents in 1929.

The total numbers and values of farm livestock in Canada for 1930 are estimated as follows, with the figures for 1929 within brackets: Horses: 3,295,000, \$202,013,000 (3,376,487, \$235,971,000); milch cows: 3,683,000, \$218,822,000 (3,684,766, \$273,817,000); other cattle: 5,254,000, \$182,263,000 (5,139,866, \$239,713,000); total cattle: 8,937,000, \$401,085,000 (8,824,632, \$513,530,000); sheep: 3,696,000, \$25,275,000 (3,635,923, \$36,118,000); swine: 4,000,000, \$58,852,000 (4,381,725, \$71,111,000).

The estimated total value of these descriptions of farm livestock in 1930 amounts to \$687,225,000, as compared with \$856,730,000 in 1929. By provinces, the total values are as follows, with the figures for 1929 within brackets: Prince Edward Island, \$8,837,000 (9,588,000); Nova Scotia, \$19,446,000 (\$22,076,000); New Brunswick, \$16,072,000 (\$17,975,000); Quebec, \$136,470,000 (\$172,452,000); Ontario, \$218,393,000 (\$277,720,000); Manitoba, \$53,741,000 (\$66,472,000); Saskatchewan, \$112,846,000 (\$134,950,000); Alberta, \$94,065,000 (\$123,133,000); British Columbia, \$27,355,000 (\$32,364,000).

The average values per head for Canada for each description of farm poultry in 1930 are estimated as follows, the averages for 1929 being given within brackets: Hens and chickens, \$0.82 (\$0.95); turkeys, \$2.31 (\$2.69); geese,

\$1.84 (\$2.11); ducks, \$1.04 (\$1.15). These averages, applied to the numbers as returned in June last, give approximately the total values. For all Canada, the numbers and values of farm poultry in 1930 are estimated as follows, with the figures for 1929 in brackets: Hens and chickens: 56,247,000, \$46,149,000 (55,242,787, \$52,387,000); turkeys: 2,399,000, \$5,547,000 (2,423,029, \$6,512,000); geese, 1,160,000, \$2,131,000 (1,555,244, \$2,436,000); ducks, 989,000, \$1,025,000 (1,111,903, \$1,274,000).

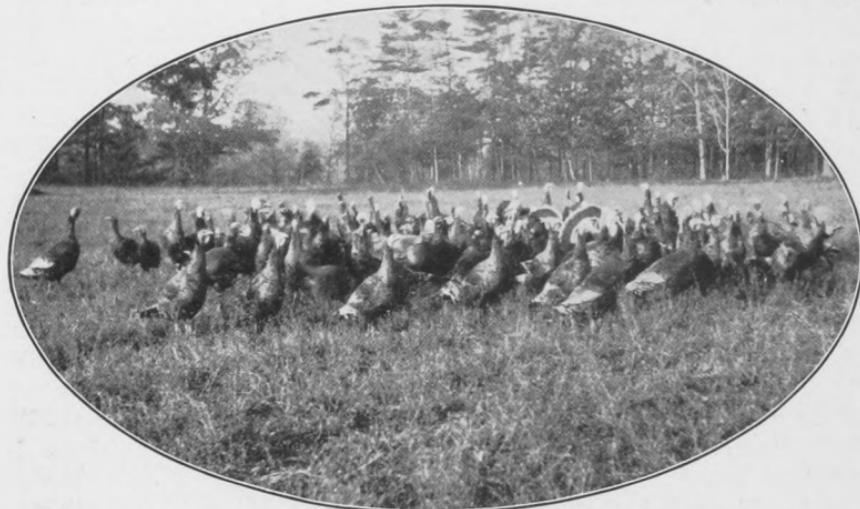
By provinces, the total values of all descriptions of poultry are as follows, the estimates for 1929 being given within brackets: Prince Edward Island, \$1,002,000 (\$1,015,000); Nova Scotia, \$1,100,000 (\$1,168,000); New Brunswick, \$1,125,000 (\$1,162,000); Quebec, \$8,909,000 (\$10,037,000); Ontario, \$22,794,000 (\$25,380,000); Manitoba, \$4,454,000 (\$5,358,000); Saskatchewan, \$6,448,000 (\$7,240,000); Alberta, \$5,464,000 (\$6,785,000); British Columbia, 3,556,000 (\$4,464,000). For the whole of Canada, the total value of all descriptions of farm poultry is estimated at \$54,852,000, in 1930, as compared with \$62,609,000 in 1929.

Value of Field Crops The value of Canada's field crops given by the Dominion Bureau of Statistics over a period of years, as follows:

Prices of agricultural products reached their peak during the war, and just after in 1919. They slumped steeply thereafter, falling to a very low level in 1923, recovering considerably, however, in later years. The value of the field crops of Canada, which in 1910 was \$384,513,795, had increased by 1914 to \$638,580,000. The maximum was reached in 1919 with a total of \$1,537,170,000. This value receded to \$899,226,200 in 1923; but the recovery of prices during recent years, combined with excellent harvests, has brought the value up to \$1,104,983,000 in 1926, \$1,173,133,600 in 1927, \$1,125,003,000 in 1928, and about \$979,750,400 in 1929.

THE FIELD CROPS OF CANADA, 1930

Field Crop	Area Acres	Total Yield Bus.	Total Value \$
Wheat	24,897,200	395,854,000	173,589,000
Oats	13,221,900	429,156,000	105,019,000
Barley	5,558,000	137,963,000	27,784,000
Rye	1,441,550	22,286,500	4,429,00
Peas	125,210	2,376,200	3,364,000
Beans	91,580	1,411,600	3,236,000
Buckwheat	493,400	10,814,000	6,963,000
Mixed grains	1,193,700	43,078,000	17,966,000
Flaxseed	579,500	4,459,000	4,415,000
Corn for husking	162,000	4,801,000	3,790,000
		cwt.	
Potatoes	574,500	49,160,000	38,949,000
Turnips, mangolds, etc...	207,630	40,077,000	18,059,000
		tons	
Hay and clover	10,511,200	15,866,000	156,210,000
Alfalfa	754,800	1,524,000	18,533,000
Fodder corn	444,600	3,670,000	22,229,000
Sugar beets	52,500	486,000	3,343,000
Grain hay			21,268,000
			<u>\$629,146,000</u>



Turkeys raised by Mrs Harkness, Oakville, Ontario

Canada's Export Trade The following list gives the chief commodity exports of Canada, in the order of their relative values. This gives a very clear indication of what Canada's trade with the world is based upon at the present time.

Commodity (In Order of Value, 1930)		Total Exports, Fiscal Year Ended March, 1930	
		Quantity	Value
1. Wheat	Bush.	177,006,369	\$215,753,475
2. Printing paper	Cwt.	49,703,585	145,401,482
3. Planks and boards	M. ft.	1,807,138	49,446,887
4. Wheat flour	Brl.	7,893,960	45,457,195
5. Wood pulp	Cwt.	17,359,190	44,913,995
6. Copper, ore and blister	Cwt.	2,396,284	37,735,413
7. Automobiles	No.	79,861	35,307,645
8. Fish	Cwt.	3,763,243	34,767,739
9. Raw gold			34,375,003
10. Whiskey	Gal.	2,904,579	25,856,136
11. Nickel	Cwt.	1,065,175	25,034,975
12. Raw furs			18,706,311
13. Farm implements			18,396,688
14. Cheese	Cwt.	922,937	18,278,004
15. Rubber tires	No.	3,238,290	18,039,924
16. Meats			15,030,671
17. Pulpwood	Cord	1,345,692	13,860,209
18. Aluminum, in bars	Cwt.	771,919	13,828,010
19. Cattle	No.	239,372	13,119,462
20. Asbestos, raw	Ton	286,497	12,074,065
21. Silver ore and bullion	Oz.	22,576,768	11,569,855
22. Lead	Cwt.	2,379,143	10,637,887
23. Barley	Bush.	14,817,071	10,388,735
24. Rubber footwear	Pair	11,854,671	9,986,392
25. Zinc	Cwt.	1,730,591	8,366,712
26. Apples, green	Brl.	1,882,280	8,111,943
27. Potatoes	Bush.	7,957,568	8,042,226
28. Fertilizers	Cwt.	4,872,908	7,990,313
29. Raw hides	Cwt.	569,573	7,730,914
30. Machinery			7,154,706

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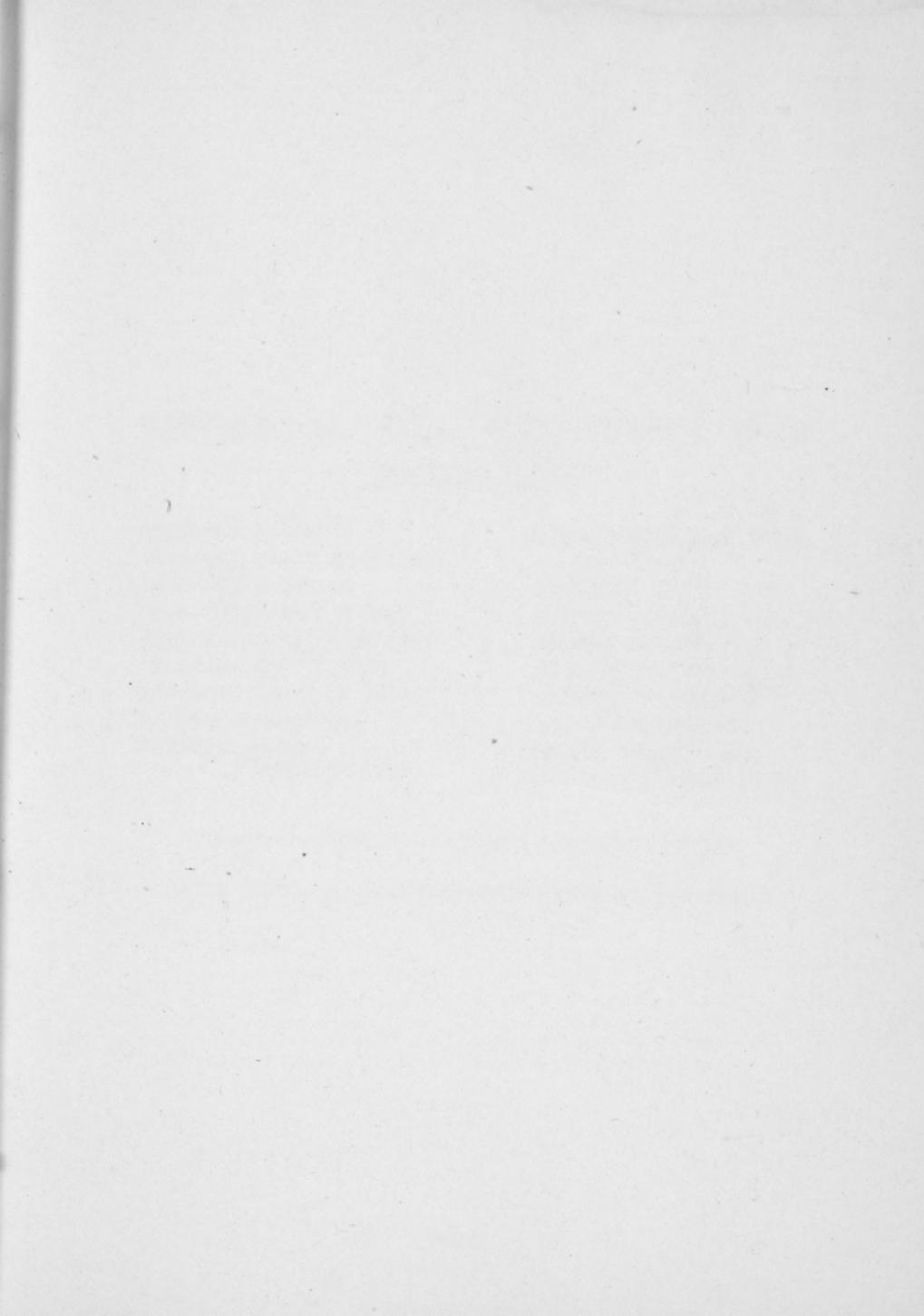
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